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OM protein - protein search, using sw model

Run on: June 8, 2001, 10:55:54 ; Search time 63.61 Seconds  
(without alignments)  
329.493 Million cell updates/sec

Title: US-09-397-548-14  
Perfect score: 5748  
Sequence: 1 MAAGCLLALTTLFQSLIG.....IIGIQFLLMLVSGSTRLL 1091

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 185757 seqs, 19210857 residues

Total number of hits satisfying chosen parameters: 185757

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Issued Patents\_AA:\*  
1: /cgn2.6/ptodata/2/1aa/5A\_COMB.pep:\*  
2: /cgn2.6/ptodata/2/1aa/5B\_COMB.pep:\*  
3: /cgn2.6/ptodata/2/1aa/6A\_COMB.pep:\*  
4: /cgn2.6/ptodata/2/1aa/6B\_COMB.pep:\*  
5: /cgn2.6/ptodata/2/1aa/PCTUS\_COMB.pep:\*  
6: /cgn2.6/ptodata/2/1aa/backfiles1.pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	5748	100.0	1091	1 US-07-745-206A-25	Sequence 25, Appl
2	5748	100.0	1091	1 US-08-455-543A-52	Sequence 52, Appl
3	5748	100.0	1091	1 US-08-223-305C-52	Sequence 52, Appl
4	5748	100.0	1091	2 US-08-311-363-25	Sequence 25, Appl
5	5744	99.9	1091	3 US-08-713-118-4	Sequence 4, Appl
6	5744	99.9	1091	4 US-09-452-007-4	Sequence 4, Appl
7	5708.5	99.3	1086	1 US-08-455-543A-54	Sequence 54, Appl
8	5708.5	99.3	1086	2 US-08-223-305C-54	Sequence 54, Appl
9	5691.5	99.0	1084	1 US-08-455-543A-56	Sequence 56, Appl
10	5691.5	99.0	1084	2 US-08-223-305C-56	Sequence 56, Appl
11	5672	98.7	1103	1 US-08-455-543A-53	Sequence 53, Appl
12	5672	98.7	1103	2 US-08-223-305C-53	Sequence 53, Appl
13	5652	98.3	1079	1 US-08-455-543A-55	Sequence 55, Appl
14	5652	98.3	1079	2 US-08-223-305C-55	Sequence 55, Appl
15	5508.5	95.8	1106	1 US-08-435-675B-5	Sequence 5, Appl
16	5490.5	95.5	1106	1 US-08-336-257A-8	Sequence 8, Appl
17	5257.5	91.5	1086	6 5386025-8	Patent No. 5386025
18	2581.5	44.9	508	1 US-08-435-675B-6	Sequence 6, Appl
19	182	3.2	885	3 US-09-074-579-5	Sequence 5, Appl
20	159.5	2.8	946	3 US-09-074-579-3	Sequence 3, Appl
21	134	2.7	903	1 US-08-021-601-12	Sequence 12, Appl
22	134	2.7	903	1 US-08-082-849B-12	Sequence 12, Appl
23	154	2.7	903	5 PCT-US94-01624-12	Sequence 12, Appl
24	152.5	2.7	789	1 US-08-471-033-32	Sequence 32, Appl
25	152.5	2.7	789	2 US-08-471-044-32	Sequence 32, Appl
26	152.5	2.7	789	2 US-08-463-483A-32	Sequence 32, Appl
27	152.5	2.7	789	2 US-08-471-046A-32	Sequence 32, Appl

28	152.5	2.7	789	2 US-08-470-566B-32	Sequence 32, Appl
29	152.5	2.7	789	2 US-08-838-219B-4	Sequence 4, Appl
30	152.5	2.7	789	2 US-08-469-334-32	Sequence 32, Appl
31	152.5	2.7	789	3 US-09-300-529-32	Sequence 32, Appl
32	152.5	2.7	789	3 US-09-233-336A-4	Sequence 4, Appl
33	152.5	2.7	789	4 US-09-233-752A-4	Sequence 4, Appl
34	150.5	2.6	789	4 US-08-960-780-6	Sequence 6, Appl
35	148.5	2.6	790	4 US-08-960-780-4	Sequence 4, Appl
36	147.5	2.6	746	3 US-08-838-219B-6	Sequence 6, Appl
37	147.5	2.6	746	3 US-09-233-336A-6	Sequence 6, Appl
38	147.5	2.6	746	4 US-09-233-752A-6	Sequence 6, Appl
39	145.5	2.5	790	4 US-08-960-780-8	Sequence 8, Appl
40	141.5	2.5	789	1 US-08-471-033-29	Sequence 29, Appl
41	141.5	2.5	789	2 US-08-471-044-29	Sequence 29, Appl
42	141.5	2.5	789	2 US-08-463-483A-29	Sequence 29, Appl
43	141.5	2.5	789	2 US-08-471-046A-29	Sequence 29, Appl
44	141.5	2.5	789	2 US-08-470-566B-29	Sequence 29, Appl
45	141.5	2.5	789	2 US-08-838-219B-2	Sequence 2, Appl

ALIGNMENTS

RESULT 1  
US-07-745-206A-25  
; Sequence 25 Application US/07745206A  
; Patent No. 5429921  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: McCue, Ann  
; APPLICANT: Feldman, Daniel  
; TITLE OF INVENTION: Human Calcium Channel Compositions and  
; TITLE OF INVENTION: Methods  
; NUMBER OF SEQUENCES: 32  
; CORRESPONDENCE ADDRESS:  
; ADDRESSER: Fitch, Even, Tabin & Flannery  
; STREET: 135 S. LaSalle  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: U.S.A.  
; ZIP: 60603  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patentin Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/07745,206A  
; FILING DATE: 19910815  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Feder, Scott B  
; REFERENCE/DOCKET NUMBER: 51504  
; TELEPHONE: 312-372-7842  
; INFORMATION FOR SEQ ID NO: 25:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1091 amino acids  
; TYPE: AMINO ACID  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; US-07-745-206A-25

Query Match 100.0%; Score 5748; DB 1; Length 1091;  
Best Local Similarity 100.0%; Pred. No. 0;  
Matches 1091; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MAAGCLLALTTLFQSLIGPSSEEPFPPSAVTIKSWVDKMOEDLVTLAKTASGVNQLVDI 60  
DB 1 MAAGCLLALTTLFQSLIGPSSEEPFPPSAVTIKSWVDKMOEDLVTLAKTASGVNQLVDI 60

QY 61 YEKYQDLYTVEPNARQOLVEIAARDIEKLSNRSKALVSLALEAEKVQAAHQWREDFASN 120  
DB 61 YEKYQDLYTVEPNARQOLVEIAARDIEKLSNRSKALVSLALEAEKVQAAHQWREDFASN 120  
QY 121 EVVYNAKDDLDPEKNDSEPSQRIKPVFIEDANFGQISYOHAAVHIPTDIYEGSTIVL 180  
DB 121 EVVYNAKDDLDPEKNDSEPSQRIKPVFIEDANFGQISYOHAAVHIPTDIYEGSTIVL 180  
QY 181 NELNWTSDALDEVFKKREDEPSLLQVFGSATGLARYYPASPWDNSRTPNKIDLYDVR 240  
DB 181 NELNWTSDALDEVFKKREDEPSLLQVFGSATGLARYYPASPWDNSRTPNKIDLYDVR 240  
QY 241 RPWYIQAASPKDMLILVDVSGVSGLTFLKLRISVSMELETSLDDDFVNVASFSNAQD 300  
DB 241 RPWYIQAASPKDMLILVDVSGVSGLTFLKLRISVSMELETSLDDDFVNVASFSNAQD 300  
QY 301 VSCFOHLVQANVRNKKVLDKDAVNNTAKGIDYKKGFGFAFEQLLNVNVRANCKIIML 360  
DB 301 VSCFOHLVQANVRNKKVLDKDAVNNTAKGIDYKKGFGFAFEQLLNVNVRANCKIIML 360  
QY 361 FTDGGEERAQEIFNKYNKDKKVRFRFSVQGHNYERGPIQWACENKGYIYEIPSIGAIR 420  
DB 361 FTDGGEERAQEIFNKYNKDKKVRFRFSVQGHNYERGPIQWACENKGYIYEIPSIGAIR 420  
QY 421 INTQBYLDVLRGPMVLAGDKAKQVOWTNYLDALGLVITGTLFPVFNITQGFENKTNLK 480  
DB 421 INTQBYLDVLRGPMVLAGDKAKQVOWTNYLDALGLVITGTLFPVFNITQGFENKTNLK 480  
QY 481 NOLILGVGVDSVLEDIKRLPRFTLCPNGYFAIDPNGYVLLHNPLOPKNPKSOEPTVL 540  
DB 481 NOLILGVGVDSVLEDIKRLPRFTLCPNGYFAIDPNGYVLLHNPLOPKNPKSOEPTVL 540  
QY 541 DFLDAELENDIKVEIRNKMIDGSEKFTRLVKQSDERYIDKGNRTYTTPVNGTDYSL 600  
DB 541 DFLDAELENDIKVEIRNKMIDGSEKFTRLVKQSDERYIDKGNRTYTTPVNGTDYSL 600  
QY 601 ALVLPYSFYIYKAKLEETIQARSKKGMKMDSETLKPDPNFEESGYTFIAPRDYCNLDKI 660  
DB 601 ALVLPYSFYIYKAKLEETIQARSKKGMKMDSETLKPDPNFEESGYTFIAPRDYCNLDKI 660  
QY 661 SDNTEFLNFEFTDRKTPNPNPCNADLINRVLLDAGFTNELVONYSKOKNIKGVKAR 720  
DB 661 SDNTEFLNFEFTDRKTPNPNPCNADLINRVLLDAGFTNELVONYSKOKNIKGVKAR 720  
QY 721 FVYTDGGITRVYPKEAGENWQENPETYEDSFYKRSILDNDNVYFTAPYFNKSGPGAYESSGI 780  
DB 721 FVYTDGGITRVYPKEAGENWQENPETYEDSFYKRSILDNDNVYFTAPYFNKSGPGAYESSGI 780  
QY 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSWNIENFTKTSIRDPCAGPVCDCRNSDVMDCVI 840  
DB 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSWNIENFTKTSIRDPCAGPVCDCRNSDVMDCVI 840  
QY 841 LDDGGFLMANHDDYTNOIGREFGEIDPSLMRHLNYSVYAFNKSYDYQSVCEPGAAPKQ 900  
DB 841 LDDGGFLMANHDDYTNOIGREFGEIDPSLMRHLNYSVYAFNKSYDYQSVCEPGAAPKQ 900  
QY 901 GAGHSAYVPSVADILQIGWATAAASWTLQOFLSLFPRLLEAVEDEDDFTASLSKQ 960  
DB 901 GAGHSAYVPSVADILQIGWATAAASWTLQOFLSLFPRLLEAVEDEDDFTASLSKQ 960  
QY 961 SCITEQTYFFONDKSFSGVLDGCNCSRFHGEKLMNTNLFIMVESKGTCPDCTRLLI 1020  
DB 961 SCITEQTYFFONDKSFSGVLDGCNCSRFHGEKLMNTNLFIMVESKGTCPDCTRLLI 1020  
QY 1021 QAEQTSDEGPNPCDMVKQPRYKGPDPVCFDNNVLEDYDCGGVSGLNPSLWYIIGIOFLLL 1080  
DB 1021 QAEQTSDEGPNPCDMVKQPRYKGPDPVCFDNNVLEDYDCGGVSGLNPSLWYIIGIOFLLL 1080  
QY 1081 WLVSSTHRL 1091  
DB 1081 WLVSSTHRL 1091

RESULT 2  
US-08-455-543A-52  
; Sequence 52, Application US/08455543A  
; Patent No. 5792846  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FastSeq Version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/455,543A  
; FILING DATE: May 31, 1995  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/223,305  
; FILING DATE: April 4, 1994  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/868,354  
; FILING DATE: April 10, 1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/620,250  
; FILING DATE: 30-NOV-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/482,384  
; FILING DATE: 20-FEB-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/US89/01408  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/176,899  
; FILING DATE: 04-APR-1988  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 6362-52517  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO 1: 52:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1091 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FRAGMENT TYPE: internal  
US-08-455-543A-52

Query Match 100.0%; Score 5748; DB 1; Length 1091;

Best Local Similarity 100.08; Pred. No. 0;			
Matches 1091; Conservative 0; Mismatches 0; Indels 0; Gaps 0;			
QY	1	MAAGCLLALTTLFOSLLIGPSSEPPFSAVTKSWDKMQEDLVTLAKTASGVNQLVDI	60
Db	1	MAAGCLLALTTLFOSLLIGPSSEPPFSAVTKSWDKMQEDLVTLAKTASGVNQLVDI	60
QY	61	YEKYODLYTVENNNARQLVEIARIDIEKLLSNRSKALVSLALEAEKVOAAHQWREDFASN	120
Db	61	YEKYODLYTVENNNARQLVEIARIDIEKLLSNRSKALVSLALEAEKVOAAHQWREDFASN	120
QY	121	EVVYNAKDDLPKNDSPGSRKIPVFIEDANFGROISYOHAAVHIPTDIYEGSTIVL	180
Db	121	EVVYNAKDDLPKNDSPGSRKIPVFIEDANFGROISYOHAAVHIPTDIYEGSTIVL	180
QY	181	NELNWTSDALDEVFKKRNREDPSLLMQVFGSATGLARYYPASPWVDSNRTPNKIDLYDVR	240
Db	181	NELNWTSDALDEVFKKRNREDPSLLMQVFGSATGLARYYPASPWVDSNRTPNKIDLYDVR	240
QY	241	RPWYIQGAASPKMDLILVDVSGVSGLTIKLRTSVSEMLETSLDDDDFVNVASFNSNAQD	300
Db	241	RPWYIQGAASPKMDLILVDVSGVSGLTIKLRTSVSEMLETSLDDDDFVNVASFNSNAQD	300
QY	301	VSCFOHLVQANVRNKKVLKDAVNNITAKGITDYKGFSAFAPOLLNINVRANCNKIIML	360
Db	301	VSCFOHLVQANVRNKKVLKDAVNNITAKGITDYKGFSAFAPOLLNINVRANCNKIIML	360
QY	361	FTDGGEEARAEIFNKYNDKKVRFVRSFGQHNRYERGPIOMACENKGYIYIPIGAI	420
Db	361	FTDGGEEARAEIFNKYNDKKVRFVRSFGQHNRYERGPIOMACENKGYIYIPIGAI	420
QY	421	INTQYLDVLGRPMYLAGKAKQOVNTNYLDALGLVITGTLVPFNITGOFENKTNLK	480
Db	421	INTQYLDVLGRPMYLAGKAKQOVNTNYLDALGLVITGTLVPFNITGOFENKTNLK	480
QY	481	NOLILGVMGVDVSLIEDIKRLTPRFTLCPNGYFFADPNQYVLLHNLOPKNPKSQEPVTL	540
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QY	541	DFLDAELENKDIKVEIRNKMIDGSEKFTPLVKSODERYIDKGNRTYTWTPVNGTDYSL	600
Db	541	DFLDAELENKDIKVEIRNKMIDGSEKFTPLVKSODERYIDKGNRTYTWTPVNGTDYSL	600
QY	601	ALVLTYSFYIYAKLEETITQARSKKMKDSETLKPDNFEESSYTFIAPRDYCNDLKI	660
Db	601	ALVLTYSFYIYAKLEETITQARSKKMKDSETLKPDNFEESSYTFIAPRDYCNDLKI	660
QY	661	SDNTEFLNNEFTDRKTPNPNPCNADLINRVLDAGFTNELVQYNSKQNKIKGVKAR	720
Db	661	SDNTEFLNNEFTDRKTPNPNPCNADLINRVLDAGFTNELVQYNSKQNKIKGVKAR	720
QY	721	FVYTDGGITRVYPKEAGENWQENPETEDSFYKRSILDNDNYVFTAPYFNKSGPGAYESGI	780
Db	721	FVYTDGGITRVYPKEAGENWQENPETEDSFYKRSILDNDNYVFTAPYFNKSGPGAYESGI	780
QY	781	MYSKAVEIYIOGKLLKPAVVGKIDVNSWIENTFTSIRDPKAGVPCCKRNSDVMDCVI	840
Db	781	MYSKAVEIYIOGKLLKPAVVGKIDVNSWIENTFTSIRDPKAGVPCCKRNSDVMDCVI	840
QY	841	LDDGGFLLMANHDDVTNOIGRPFGEIDPSLMRHLNINSVYAKNSVDYQSVCEPGAAPQ	900
Db	841	LDDGGFLLMANHDDVTNOIGRPFGEIDPSLMRHLNINSVYAKNSVDYQSVCEPGAAPQ	900
QY	901	GAGHSAYVPSVADILQIGWATAAASWTLQOFLLSLFPRLLEAVEMEDDDFTASLSKQ	960
Db	901	GAGHSAYVPSVADILQIGWATAAASWTLQOFLLSLFPRLLEAVEMEDDDFTASLSKQ	960
QY	961	SCITEQTQYFFONDSKSGVLDGNCNCRIFHGEKMLNTLIFINVESKGTGCPDTRLLI	1020
Db	961	SCITEQTQYFFONDSKSGVLDGNCNCRIFHGEKMLNTLIFINVESKGTGCPDTRLLI	1020
QY	1021	QAEQTSDBGPCDMVKQPRYKGPVDFDNNVLEDTDCGGVSGNLPSLWYIIGIQFLLL	1080

Db	1021	QAEQTSDBGPCDMVKQPRYKGPVDFDNNVLEDTDCGGVSGNLPSLWYIIGIQFLLL	1080
QY	1081	WLVSSTHRL 1091	
Db	1081	WLVSSTHRL 1091	
RESULT 3			
US-08-223-305C-52			
; Sequence 52, Application US/08223305C			
; Patent No. 5851824			
; GENERAL INFORMATION:			
; APPLICANT: Harpold, Michael			
; APPLICANT: Ellis, Steven			
; APPLICANT: Williams, Mark			
; APPLICANT: Feldman, Daniel			
; APPLICANT: McCue, Ann			
; APPLICANT: Brenner, Robert			
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND			
; NUMBER OF SEQUENCES: 57			
; CORRESPONDENCE ADDRESS:			
; ADDRESSEE: Brown, Martin, Haller & McClain			
; STREET: 1660 Union Street			
; CITY: San Diego			
; STATE: California			
; COUNTRY: USA			
; ZIP: 92101-2926			
; COMPUTER READABLE FORM:			
; MEDIUM TYPE: Diskette			
; COMPUTER: IBM Compatible			
; OPERATING SYSTEM: DOS			
; SOFTWARE: FastSEQ Version 1.5			
; CURRENT APPLICATION DATA:			
; APPLICATION NUMBER: US/08/223,305C			
; FILING DATE: April 4, 1994			
; PRIOR APPLICATION DATA:			
; APPLICATION NUMBER: 07/868,354			
; FILING DATE: April 10, 1992			
; PRIOR APPLICATION DATA:			
; APPLICATION NUMBER: US 07/745,206			
; FILING DATE: 15-AUG-1991			
; PRIOR APPLICATION DATA:			
; APPLICATION NUMBER: US 07/620,250			
; FILING DATE: 30-NOV-1990			
; PRIOR APPLICATION DATA:			
; APPLICATION NUMBER: US 07/482,384			
; FILING DATE: 20-FEB-1990			
; PRIOR APPLICATION DATA:			
; APPLICATION NUMBER: US 07/603,751			
; FILING DATE: 04-APR-1989			
; PRIOR APPLICATION DATA:			
; APPLICATION NUMBER: WO PCT/US89/01408			
; FILING DATE: 04-APR-1989			
; PRIOR APPLICATION DATA:			
; APPLICATION NUMBER: PS 07/176,899			
; FILING DATE: 04-APR-1988			
; ATTORNEY/AGENT INFORMATION:			
; NAME: Seidman, Stephanie L.			
; REGISTRATION NUMBER: 33,779			
; REFERENCE/DOCKET NUMBER: 52516 (P519739)			
; TELEPHONE: (619)238-0999			
; TELEFAX: (619)238-0062			
; INFORMATION FOR SEQ ID NO: 52:			
; SEQUENCE CHARACTERISTICS:			
; LENGTH: 1091 amino acids			
; TYPE: amino acid			
; STRANDEDNESS: single			
; TOPOLOGY: linear			
; MOLECULE TYPE: protein			
; FRAGMENT TYPE: internal			
US-08-223-305C-52			

Query Match 100.0%; Score 5748; DB 2; Length 1091;  
Best Local Similarity 100.0%; Pred. No. 0;  
Matches 1091; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MAAGCLLALTTLTFLQSLLLIGPSSEPPPSAVTIKSWDKMQEDLVTLAKTAGVNLVDI 60  
DB 1 MAAGCLLALTTLTFLQSLLLIGPSSEPPPSAVTIKSWDKMQEDLVTLAKTAGVNLVDI 60

QY 61 YEKYQDLYTVEPNARQLVEIARQIEKLLSNRSKALVSLALEAEKVQAAHQRWEDFASN 120  
DB 61 YEKYQDLYTVEPNARQLVEIARQIEKLLSNRSKALVSLALEAEKVQAAHQRWEDFASN 120

QY 121 EVVYNNAKDDLPEKNDSEPGSQRIKPVIEDANFGROIYQHAHVHIPTDIYEGSTIVL 180  
DB 121 EVVYNNAKDDLPEKNDSEPGSQRIKPVIEDANFGROIYQHAHVHIPTDIYEGSTIVL 180

QY 181 NELNWTSALEDFVKKREEDPSLLMQVFGSATGLARYYPASVPWDSRTPNKIDLYDVR 240  
DB 181 NELNWTSALEDFVKKREEDPSLLMQVFGSATGLARYYPASVPWDSRTPNKIDLYDVR 240

QY 241 RPYWIGAAAPKMDLLVDVSGVSLTLKLI RTSVSEMLETSLDDDFVNVASFNSNAQD 300  
DB 241 RPYWIGAAAPKMDLLVDVSGVSLTLKLI RTSVSEMLETSLDDDFVNVASFNSNAQD 300

QY 301 VSCFQHLVQANVRNKVLDKAVNNITAKITDYKKGFSFAFQOLLNINVSRANCKIIML 360  
DB 301 VSCFQHLVQANVRNKVLDKAVNNITAKITDYKKGFSFAFQOLLNINVSRANCKIIML 360

QY 361 FTDGGERAQEIFNKYKDKYRVERFVSGQHYERGPQIOWMACENKGYIYIPISGAIR 420  
DB 361 FTDGGERAQEIFNKYKDKYRVERFVSGQHYERGPQIOWMACENKGYIYIPISGAIR 420

QY 421 INTQEYLDVLRPMVLGDKAQVQWNTVYLDLELGLVITGTLVPFNITGTFENKTNLK 480  
DB 421 INTQEYLDVLRPMVLGDKAQVQWNTVYLDLELGLVITGTLVPFNITGTFENKTNLK 480

QY 481 NOLILGVGVDSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHNPLOPKPKSQEPVTL 540  
DB 481 NOLILGVGVDSLEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHNPLOPKPKSQEPVTL 540

QY 541 DFLDALENDIKVEIRNMKIDGSEKFTRLVKQSDERYIDKGNRTYTWTPVNGTDSL 600  
DB 541 DFLDALENDIKVEIRNMKIDGSEKFTRLVKQSDERYIDKGNRTYTWTPVNGTDSL 600

QY 601 ALVLPYTSFYIIKALEETITQARSKKGMKDSITLKPDPNFEESGTYTFIAPRDYCNDLKI 660  
DB 601 ALVLPYTSFYIIKALEETITQARSKKGMKDSITLKPDPNFEESGTYTFIAPRDYCNDLKI 660

QY 661 SDNTEFLNFEFIDRKTTPNPNNSADLINRVLLDAGFTNELVQYNSKQKNIKGVKAR 720  
DB 661 SDNTEFLNFEFIDRKTTPNPNNSADLINRVLLDAGFTNELVQYNSKQKNIKGVKAR 720

QY 721 FVYTDGGITRVYPKEAGENWQENPETEYDFYKRSILDNDNYVFTAPYKNSGPGAYESGI 780  
DB 721 FVYTDGGITRVYPKEAGENWQENPETEYDFYKRSILDNDNYVFTAPYKNSGPGAYESGI 780

QY 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSWIENTFTSTIRDCAGVPCCKRNSDVMDCVI 840  
DB 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSWIENTFTSTIRDCAGVPCCKRNSDVMDCVI 840

QY 841 LDGQFLMANHDDYTNIGRFFGIDPSLMRHLNIVSYAFNKSIDYOSVCEPGAAPKQ 900  
DB 841 LDGQFLMANHDDYTNIGRFFGIDPSLMRHLNIVSYAFNKSIDYOSVCEPGAAPKQ 900

QY 901 GAGHSAYVPSVADILQIGWATAAWSILQOFLTSLFPRLLEAVEMEDDDFTASLSKQ 960  
DB 901 GAGHSAYVPSVADILQIGWATAAWSILQOFLTSLFPRLLEAVEMEDDDFTASLSKQ 960

QY 961 SCITEQTOYFFDNDKSKFSGLDCGNCRSRIFHGEKLMNTNLIIFINVESTKGCPCDTRLLI 1020  
DB 961 SCITEQTOYFFDNDKSKFSGLDCGNCRSRIFHGEKLMNTNLIIFINVESTKGCPCDTRLLI 1020

QY 1021 QAEQTSDEGNPCDMVKQPRYKRGPDVCFDNNVLEDYDCGGVSGNLNPSLWYIIGIOFLLL 1080  
DB 1021 QAEQTSDEGNPCDMVKQPRYKRGPDVCFDNNVLEDYDCGGVSGNLNPSLWYIIGIOFLLL 1080

QY 1081 WLVSNGTHRL 1091  
DB 1081 WLVSNGTHRL 1091

RESULT 4  
US-08-311-363-25  
; Sequence 25; Application US/08311363  
; Patent No. 5876958  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: Human Calcium Channel Compositions and  
; NUMBER OF SEQUENCES: 32  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent in Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/311.363  
; FILING DATE:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/07/45.206  
; FILING DATE: 15-AUG-1991  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 6362-51506  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 25:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1091 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-08-311-363-25

Query Match 100.0%; Score 5748; DB 2; Length 1091;  
Best Local Similarity 100.0%; Pred. No. 0;  
Matches 1091; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MAAGCLLALTTLTFLQSLLLIGPSSEPPPSAVTIKSWDKMQEDLVTLAKTAGVNLVDI 60  
DB 1 MAAGCLLALTTLTFLQSLLLIGPSSEPPPSAVTIKSWDKMQEDLVTLAKTAGVNLVDI 60

QY 61 YEKYQDLYTVEPNARQLVEIARQIEKLLSNRSKALVSLALEAEKVQAAHQRWEDFASN 120  
DB 61 YEKYQDLYTVEPNARQLVEIARQIEKLLSNRSKALVSLALEAEKVQAAHQRWEDFASN 120

QY 121 EVVYNNAKDDLPEKNDSEPGSQRIKPVIEDANFGROIYQHAHVHIPTDIYEGSTIVL 180  
DB 121 EVVYNNAKDDLPEKNDSEPGSQRIKPVIEDANFGROIYQHAHVHIPTDIYEGSTIVL 180



QY 181 NELNWTSAIDVEFKKREEDPSLLWQVFGSATGLARYYPASPDVNSRTPNKLIDLYDVR 240  
DB 181 NELNWTSAIDVEFKKREEDPSLLWQVFGSATGLARYYPASPDVNSRTPNKLIDLYDVR 240  
QY 241 RPWYIQAASPKDMLILVDVSGVSGTLKLTISVSEMLETLSDDDFVNVAESNSAOD 300  
DB 241 RPWYIQAASPKDMLILVDVSGVSGTLKLTISVSEMLETLSDDDFVNVAESNSAOD 300  
QY 301 VSCFOHLVQANVRNKKVLDKAVNNITAKGIDYKKGFSFAFQOLLNLYNVRANCKIIML 360  
DB 301 VSCFOHLVQANVRNKKVLDKAVNNITAKGIDYKKGFSFAFQOLLNLYNVRANCKIIML 360  
QY 361 FTDGGEERAQEIFNKNKDKVYRFRFSVQOHNYERGPQIOWMACENKGYEYIPIGATR 420  
DB 361 FTDGGEERAQEIFNKNKDKVYRFRFSVQOHNYERGPQIOWMACENKGYEYIPIGATR 420  
QY 421 INTQEVLDVGRPMVLGDKAKQVQWNTVYLDALGLVITGTLPVFNITGOFENKTNLK 480  
DB 421 INTQEVLDVGRPMVLGDKAKQVQWNTVYLDALGLVITGTLPVFNITGOFENKTNLK 480  
QY 481 NOLILGVMGVDVSLIEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHNPQLPKPKSQEPVTL 540  
DB 481 NOLILGVMGVDVSLIEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHNPQLPKPKSQEPVTL 540  
QY 541 DFLDAELNDIKVIRNKMIDGESSEKTRTLVKSDERYIDKGNRTYTWTPVNGTDYSL 600  
DB 541 DFLDAELNDIKVIRNKMIDGESSEKTRTLVKSDERYIDKGNRTYTWTPVNGTDYSL 600  
QY 601 ALVLPYTFYIIKALEETITQARKKGMKDSSETLKPDPNFESGVTFTAPRDCNDLKI 660  
DB 601 ALVLPYTFYIIKALEETITQARKKGMKDSSETLKPDPNFESGVTFTAPRDCNDLKI 660  
QY 661 SDNTEFLNFEFIDRKTTPNPNPCNADLINRVLLDAGFTNELVQVNSKQKNIKGVKAR 720  
DB 661 SDNTEFLNFEFIDRKTTPNPNPCNADLINRVLLDAGFTNELVQVNSKQKNIKGVKAR 720  
QY 721 FVYTDGGITRVPKEAGENQNPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
DB 721 FVYTDGGITRVPKEAGENQNPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
QY 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSWIENTKTSIRDPKAGPVCDCRNSDVMDCVI 840  
DB 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSWIENTKTSIRDPKAGPVCDCRNSDVMDCVI 840  
QY 841 LDDGGFLLMANHDDVTNIGRFFGEIDPSLMRHLVNI SVYAFNKSVDYQSVCEPGAAPQ 900  
DB 841 LDDGGFLLMANHDDVTNIGRFFGEIDPSLMRHLVNI SVYAFNKSVDYQSVCEPGAAPQ 900  
QY 901 GAGHSAYVPSVADILQIGWATAAWSILOQFLLSLFPRLLEAVEMDDDDFTASLSQ 960  
DB 901 GAGHSAYVPSVADILQIGWATAAWSILOQFLLSLFPRLLEAVEMDDDDFTASLSQ 960  
QY 961 SCITEQTQFFNDKSFSGVLDGNCNCRIFHGEKLMNTNLIFIMVESKGTCPDTRLLI 1020  
DB 961 SCITEQTQFFNDKSFSGVLDGNCNCRIFHGEKLMNTNLIFIMVESKGTCPDTRLLI 1020  
QY 1021 QAEQTSQDGNPCDMVKQPRYKGPDPVCFDNNVLEDYTDGGSGLNPSLWYIIGIQFLL 1080  
DB 1021 QAEQTSQDGNPCDMVKQPRYKGPDPVCFDNNVLEDYTDGGSGLNPSLWYIIGIQFLL 1080  
QY 1081 WLVSQSTHRL 1091  
DB 1081 WLVSQSTHRL 1091

## RESULT 5

US-08-713-118-4

; Sequence 4, Application US/08713118

; Patent No. 6040436

; GENERAL INFORMATION:

; APPLICANT: Franco, Rodrigo

; APPLICANT: Sun Chen, Ai Ru

APPLICANT: Suey, David J.  
TITLE OF INVENTION: NUCLEIC ACID ENCODING HUMAN NEURONAL  
NUMBER OF SEQUENCES: 6  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.  
CITY: Lexington  
STATE: MA  
COUNTRY: USA  
ZIP: 02173-4799  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US798/713,118  
FILING DATE: 16-SEP-1996  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: Mata, Elizabeth W.  
REGISTRATION NUMBER: 38,236  
REFERENCE/DOCKET NUMBER: ACC96-01  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-861-6240  
TELEFAX: 617-861-9540  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1091 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-713-118-4

Query Match 99.9% Score 5744; DB 3; Length 1091;  
Best Local Similarity 99.9%; Pred. No. 0;  
Matches 1090; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MAAGCLLALTTLFSLGLGSPSEPPPSAVTIKSWDKMQEDLVTLAKTASGNOLVDI 60  
DB 1 MAAGCLLALTTLFSLGLGSPSEPPPSAVTIKSWDKMQEDLVTLAKTASGNOLVDI 60  
QY 61 YEKYQDLTYVEPNNAQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHWRDFASN 120  
DB 61 YEKYQDLTYVEPNNAQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHWRDFASN 120  
QY 121 EVVYNNAKDDLDPEKNDSEPGSORIKPVIEDANFGROIYQHAHVHIPTDIYEGSTIVL 180  
DB 121 EVVYNNAKDDLDPEKNDSEPGSORIKPVIEDANFGROIYQHAHVHIPTDIYEGSTIVL 180  
QY 181 NELNWTSAIDVEFKKREEDPSLLWQVFGSATGLARYYPASPDVNSRTPNKLIDLYDVR 240  
DB 181 NELNWTSAIDVEFKKREEDPSLLWQVFGSATGLARYYPASPDVNSRTPNKLIDLYDVR 240  
QY 241 RPWYIQAASPKDMLILVDVSGVSGTLKLTISVSEMLETLSDDDFVNVAESNSAOD 300  
DB 241 RPWYIQAASPKDMLILVDVSGVSGTLKLTISVSEMLETLSDDDFVNVAESNSAOD 300  
QY 301 VSCFOHLVQANVRNKKVLDKAVNNITAKGIDYKKGFSFAFQOLLNLYNVRANCKIIML 360  
DB 301 VSCFOHLVQANVRNKKVLDKAVNNITAKGIDYKKGFSFAFQOLLNLYNVRANCKIIML 360  
QY 361 FTDGGEERAQEIFNKNKDKVYRFRFSVQOHNYERGPQIOWMACENKGYEYIPIGATR 420  
DB 361 FTDGGEERAQEIFNKNKDKVYRFRFSVQOHNYERGPQIOWMACENKGYEYIPIGATR 420  
QY 421 INTQEVLDVGRPMVLGDKAKQVQWNTVYLDALGLVITGTLPVFNITGOFENKTNLK 480  
DB 421 INTQEVLDVGRPMVLGDKAKQVQWNTVYLDALGLVITGTLPVFNITGOFENKTNLK 480  
QY 481 NOLILGVMGVDVSLIEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHNPQLPKPKSQEPVTL 540

Db 481 NQILGVGVDVSLDIKRLTFRFTLCPNGYFAIDPNGYALLHPLNLPKQSPQVTL 540  
QY 541 DFLDAELENDIKVEIRKMKIDGSEKTRFTLVKSODERYIDKGNRTYTWTPVNGTDYSL 600  
Db 541 DFLDAELENDIKVEIRKMKIDGSEKTRFTLVKSODERYIDKGNRTYTWTPVNGTDYSL 600  
QY 601 ALVLPYSFYIKAKLEETITQARSKGKMKDSETLKPNFEESGYTFIAPRDYCNLKI 660  
Db 601 ALVLPYSFYIKAKLEETITQARSKGKMKDSETLKPNFEESGYTFIAPRDYCNLKI 660  
QY 661 SDNTEFLNFEIDRKTNPNSCNADLINRVLLDAGFTNELVQYNSKQNIKGVKAR 720  
Db 661 SDNTEFLNFEIDRKTNPNSCNADLINRVLLDAGFTNELVQYNSKQNIKGVKAR 720  
QY 721 FVYTDGGITRVYPKEAGENQENPETEYDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
Db 721 FVYTDGGITRVYPKEAGENQENPETEYDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
QY 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSWIENTFTKTSIRDPCAGPVCDCKRNSDMDCVI 840  
Db 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSWIENTFTKTSIRDPCAGPVCDCKRNSDMDCVI 840  
QY 841 LDGGLLHANHDDYTNQIRFGCEIDPSLMRHLVNSIYAFNKSVDYOSVCEPGAAPKQ 900  
Db 841 LDGGLLHANHDDYTNQIRFGCEIDPSLMRHLVNSIYAFNKSVDYOSVCEPGAAPKQ 900  
QY 901 GAGRSAYVPSVADILOIGWATAAAMSILQOFLLSLTPRLLLEAVEMEDDDFTASLSKQ 960  
Db 901 GAGRSAYVPSVADILOIGWATAAAMSILQOFLLSLTPRLLLEAVEMEDDDFTASLSKQ 960  
QY 961 SCITEQTQVFFDNDSKFSFGLVDCGNCRIHFHGEKLMNTNLIFIMVESKGTCPDTRLLI 1020  
Db 961 SCITEQTQVFFDNDSKFSFGLVDCGNCRIHFHGEKLMNTNLIFIMVESKGTCPDTRLLI 1020  
QY 1021 QAROTSDGNPCDMVQOPRYKGPVCFDNNVLEDYDCGGVSGLNPSLWYIIGIQFLL 1080  
Db 1021 QAROTSDGNPCDMVQOPRYKGPVCFDNNVLEDYDCGGVSGLNPSLWYIIGIQFLL 1080  
QY 1081 WLVSNGTHRL 1091  
Db 1081 WLVSNGTHRL 1091

RESULT 6

US-09-452-007-4  
; Sequence 4, Application US/09452007  
; Patent No. 6140485  
; GENERAL INFORMATION:  
; APPLICANT: Franco, Rodrigo  
; APPLICANT: Sun Chen, Ai Ru  
; APPLICANT: Suey, David J.  
; TITLE OF INVENTION: NUCLEIC ACID ENCODING HUMAN NEURONAL  
; TITLE OF INVENTION: CALCIUM CHANNEL SUBUNITS  
; NUMBER OF SEQUENCES: 6  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.  
; STREET: Two Militia Drive  
; CITY: Lexington  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 02173-4799  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/452,007  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/08/713,118

1000  
; FILING DATE: 16-SEP-1996  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Meta, Elizabeth W.  
; REGISTRATION NUMBER: 38,236  
; REFERENCE/DOCKET NUMBER: ACC96-01  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 617-861-6240  
; TELEFAX: 617-861-9540  
; INFORMATION FOR SEQ ID NO: 4:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1091 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-09-452-007-4

Query Match 99.9%; Score 5744; DB 4; Length 1091;  
Best Local Similarity 99.9%; Pred. No. 0;  
Matches 1090; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MAAGCULLALTTLFOSLLIGPSSEBPSPSAVTIKSWDKMQEDLVTLAKTASGVNOLVDI 60  
Db 1 MAAGCULLALTTLFOSLLIGPSSEBPSPSAVTIKSWDKMQEDLVTLAKTASGVNOLVDI 60  
QY 61 YEKYQDLYTVEPNNAQLVEIAARDIEKLLSNRSKALVSALAEAEKVQAAHQWREDFASN 120  
Db 61 YEKYQDLYTVEPNNAQLVEIAARDIEKLLSNRSKALVSALAEAEKVQAAHQWREDFASN 120  
QY 121 EYVYNKADLDPEKNDESPGSGRIKPVIEDANFGQISYQHAHVHIPTDIYEGSTIVL 180  
Db 121 EYVYNKADLDPEKNDESPGSGRIKPVIEDANFGQISYQHAHVHIPTDIYEGSTIVL 180  
QY 181 NELNWTSAIDVEYFKNREEDPSLLMQVFGSATGLARYYPASPWVDSRTPNKIDLDVDR 240  
Db 181 NELNWTSAIDVEYFKNREEDPSLLMQVFGSATGLARYYPASPWVDSRTPNKIDLDVDR 240  
QY 241 RPWYIQGAASPKDMLILVDVSGVSGTLKLTIRTSYSEMLETSLDSDDFVNVASFNSNAO 300  
Db 241 RPWYIQGAASPKDMLILVDVSGVSGTLKLTIRTSYSEMLETSLDSDDFVNVASFNSNAO 300  
QY 301 VSCFQHLVQANVRNKKVLDKAVNNITAKITDYKKGFSAFQOLLNYSRANCNKIIML 360  
Db 301 VSCFQHLVQANVRNKKVLDKAVNNITAKITDYKKGFSAFQOLLNYSRANCNKIIML 360  
QY 361 FTDGGEERAQEIFNKYKDKVRFPSVQGHYERGPQIOWMACENKGYEYIETPSIGAIR 420  
Db 361 FTDGGEERAQEIFNKYKDKVRFPSVQGHYERGPQIOWMACENKGYEYIETPSIGAIR 420  
QY 421 INTQEYLDVLRPMVLGADKAKQVQWNTNYLDALGLVITGTLPVFNITGOFENKTNLK 480  
Db 421 INTQEYLDVLRPMVLGADKAKQVQWNTNYLDALGLVITGTLPVFNITGOFENKTNLK 480  
QY 481 NQLILGVMGVDVSLDIKRLTFRFTLCPNGYFAIDPNGYALLHPLNLPKQSPQVTL 540  
Db 481 NQLILGVMGVDVSLDIKRLTFRFTLCPNGYFAIDPNGYALLHPLNLPKQSPQVTL 540  
QY 541 DFLDAELENDIKVEIRKMKIDGSEKTRFTLVKSODERYIDKGNRTYTWTPVNGTDYSL 600  
Db 541 DFLDAELENDIKVEIRKMKIDGSEKTRFTLVKSODERYIDKGNRTYTWTPVNGTDYSL 600  
QY 601 ALVLPYSFYIKAKLEETITQARSKGKMKDSETLKPNFEESGYTFIAPRDYCNLKI 660  
Db 601 ALVLPYSFYIKAKLEETITQARSKGKMKDSETLKPNFEESGYTFIAPRDYCNLKI 660  
QY 661 SDNTEFLNFEIDRKTNPNSCNADLINRVLLDAGFTNELVQYNSKQNIKGVKAR 720  
Db 661 SDNTEFLNFEIDRKTNPNSCNADLINRVLLDAGFTNELVQYNSKQNIKGVKAR 720  
QY 721 FVYTDGGITRVYPKEAGENQENPETEYDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
Db 721 FVYTDGGITRVYPKEAGENQENPETEYDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780

QY 781 MVSKEVETIOGKLLKPAVVGKIDVNSHENTKTSIRDPKAGPVCDCKRNSDVMDCVI 840  
DB 781 MVSKEVETIOGKLLKPAVVGKIDVNSHENTKTSIRDPKAGPVCDCKRNSDVMDCVI 840  
QY 841 LDGSGFLMANHDDYNOIGRFGEDPSLMRHLVNSVFAFNKSYDYOSVCEPAGAPKQ 900  
DB 841 LDGSGFLMANHDDYNOIGRFGEDPSLMRHLVNSVFAFNKSYDYOSVCEPAGAPKQ 900  
QY 901 GAGHSAYVPSADILQIGWATAAAMSILQOFLSLTFRLEAVEMEDDDFTASLSKQ 960  
DB 901 GAGHSAYVPSADILQIGWATAAAMSILQOFLSLTFRLEAVEMEDDDFTASLSKQ 960  
QY 961 SCITEQTOYFFDNDKSFSGVLDGNCNRSIFHGEKLMNTNLFIMVESKGTCPDTRLLI 1020  
DB 961 SCITEQTOYFFDNDKSFSGVLDGNCNRSIFHGEKLMNTNLFIMVESKGTCPDTRLLI 1020  
QY 1021 QABQTSQGNPCDMVKQPRYRKGPVDFCNVNVLEDYDCGGVSGNLPNLSWYIIGIOFLLL 1080  
DB 1021 QABQTSQGNPCDMVKQPRYRKGPVDFCNVNVLEDYDCGGVSGNLPNLSWYIIGIOFLLL 1080  
QY 1081 WLVSGSTHRL 1091  
DB 1081 WLVSGSTHRL 1091

RESULT 7  
US-08-455-543A-54  
; Sequence 54, Application US/08455543A  
; Patent No. 5792846  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FastSeq Version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/455,543A  
; FILING DATE: May 31, 1995  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/223,305  
; FILING DATE: April 4, 1994  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/868,354  
; FILING DATE: April 10, 1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/620,250  
; FILING DATE: 30-NOV-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/482,384  
; FILING DATE: 20-FEB-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: WO PCT/US89/01408  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/176,899  
; FILING DATE: 04-APR-1988  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 6362-52517  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 54:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1086 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FRAGMENT TYPE: Internal  
; US-08-455-543A-54  
  
Query Match 99.3%; Score 5708.5; DB 1; Length 1086;  
Best Local Similarity 99.5%; Pred. No. 0;  
Matches 1086; Conservative 0; Mismatches 0; Indels 5; Gaps 1;  
  
QY 1 MAAGCLLALTTLTFLQSLTIGPSSEEPFSAVTIKSWDKMOEDLVTAKTASGVNQLVDI 60  
DB 1 MAAGCLLALTTLTFLQSLTIGPSSEEPFSAVTIKSWDKMOEDLVTAKTASGVNQLVDI 60  
QY 61 YEKYQDLYTVEPNARQLVEIAARDIEKLLSNRKSALVSLALEAEKVQAAHOREDFASN 120  
DB 61 YEKYQDLYTVEPNARQLVEIAARDIEKLLSNRKSALVSLALEAEKVQAAHOREDFASN 120  
QY 121 EYVYNAKDDLDPEKNDSEPGSORIKPVFIEDANFGRQISYQHAHVHPTDIYEGSTIVL 180  
DB 121 EYVYNAKDDLDPEKNDSEPGSORIKPVFIEDANFGRQISYQHAHVHPTDIYEGSTIVL 180  
QY 181 NELNWTISALDEVFKKREDEPSSLWQVFGSATGLARYYPASPMVDNSRPNKIDLDYDVR 240  
DB 181 NELNWTISALDEVFKKREDEPSSLWQVFGSATGLARYYPASPMVDNSRPNKIDLDYDVR 240  
QY 241 RPWYIQGAASPKDMLILVDVSGVSGTLTKLIRTSYSEMLETLSDDDFNVASFNSNAQD 300  
DB 241 RPWYIQGAASPKDMLILVDVSGVSGTLTKLIRTSYSEMLETLSDDDFNVASFNSNAQD 300  
QY 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGIDYKKGFSFAFEOLLNYSRANCNKIIML 360  
DB 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGIDYKKGFSFAFEOLLNYSRANCNKIIML 360  
QY 361 FTDGGERAQELFNKYNKDKVRFVRESYGOHNYERGPQWMACENKGYEYIPSGAIR 420  
DB 361 FTDGGERAQELFNKYNKDKVRFVRESYGOHNYERGPQWMACENKGYEYIPSGAIR 420  
QY 421 INTQEYLDVLRPMVLGADKAKQVQNTVYLDALGLVITGTLPVFNITGQFENKTNLK 480  
DB 421 INTQEYLDVLRPMVLGADKAKQVQNTVYLDALGLVITGTLPVFNITGQFENKTNLK 480  
QY 481 NOLILGVMGVDVSLIEDIKRLTPRFTLCPNGYVFAIDPNGYVLLHLPNLPKNSQEPVTL 540  
DB 481 NOLILGVMGVDVSLIEDIKRLTPRFTLCPNGYVFAIDPNGYVLLHLPNLPKNSQEPVTL 540  
QY 541 DFLDAELENDEIKVEIRNKMIDGESGKTFRTLVKSODERYIDKNGRTYTWTPVNGTDYSL 600  
DB 541 DFLDAELENDEIKVEIRNKMIDGESGKTFRTLVKSODERYIDKNGRTYTWTPVNGTDYSL 600  
QY 601 ALVLPYTFYIYKAKLEETITQARSKGKMKDSETLKPNFESGYTFFIAPRDYCNLDKI 660  
DB 601 ALVLPYTFYIYKAKLEETITQARSKGKMKDSETLKPNFESGYTFFIAPRDYCNLDKI 660  
QY 661 SDNTEFLNFEFIDRKTNNPNSCNADLNINRVLLDAGFTNELVQVNSKQKNKGVKAR 720  
DB 661 SDNTEFLNFEFIDRKTNNPNSCNADLNINRVLLDAGFTNELVQVNSKQKNKGVKAR 720

Db 656 SDNTEFLNFEIDTRKTPNPNPCNADLNRLVLLDAGFTNELVQVNSKQNKIKGVAR 715  
QY 721 FVVDGGITRVYPKEAGENQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
Db 716 FVVDGGITRVYPKEAGENQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 775  
QY 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSHWFNFTKTSIRDPGAGVPCDCKRNSDVMDCVI 840  
Db 776 MYSKAVEIYIOGKLLKPAVVGKIDVNSHWFNFTKTSIRDPGAGVPCDCKRNSDVMDCVI 835  
QY 841 LDDGGFLMANHDDYTNQIGRFFGEIDPSLMRHLNYSVYAFNKSYDYQSVCEPGAAPKQ 900  
Db 836 LDDGGFLMANHDDYTNQIGRFFGEIDPSLMRHLNYSVYAFNKSYDYQSVCEPGAAPKQ 895  
QY 901 GAGHSAYVPSVADILQIGWATAAANSILOQFLSLFPPRLLEAVEMDDDDFTASLSKQ 960  
Db 896 GAGHSAYVPSVADILQIGWATAAANSILOQFLSLFPPRLLEAVEMDDDDFTASLSKQ 955  
QY 961 SCITEOTQYFFNDKSKFSFVLDCCGNCSPHFHGEKLMNTLFIINVESKGTCPDTRLLI 1020  
Db 956 SCITEOTQYFFNDKSKFSFVLDCCGNCSPHFHGEKLMNTLFIINVESKGTCPDTRLLI 1015  
QY 1021 QAEQTSQGNPCDMYKQPRYKGPDPVCFDNNVLEDYTDGCGVSGLNPSLWYIIGIQFLLL 1080  
Db 1016 QAEQTSQGNPCDMYKQPRYKGPDPVCFDNNVLEDYTDGCGVSGLNPSLWYIIGIQFLLL 1075  
QY 1081 WLVSQSTHRL 1091  
Db 1076 WLVSQSTHRL 1086

RESULT 8

US-08-223-305C-54  
; Sequence 54, Application US/08223305C  
; Patent No. 5851824  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FastSeq version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/223,305C  
; FILING DATE: April 4, 1994  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/868,354  
; FILING DATE: April 10, 1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/620,250  
; FILING DATE: 30-NOV-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/482,384  
; FILING DATE: 20-FEB-1990  
; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/US89/01408  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/176,899  
; FILING DATE: 04-APR-1988  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 52516 (P519739)  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 54:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1086 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FRAGMENT TYPE: internal  
; US-08-223-305C-54

Query Match 99.3%; Score 5708.5; DB 2; Length 1086;  
Best Local Similarity 99.5%; Pred. No. 0;  
Matches 1086; Conservative 0; Mismatches 0; Indels 5; Gaps 1;

Qy 1 MAAGCLLALTTLFQSLILIGPSSEPPFPSPAVTIKSWDKMQEDVTLAKTAGSVNQLVDI 60  
Db 1 MAAGCLLALTTLFQSLILIGPSSEPPFPSPAVTIKSWDKMQEDVTLAKTAGSVNQLVDI 60  
Qy 61 YEKYQDLYTVEPNARQLVEITAARDIEKLLSNRSKALYSALAEKVOAAHQRDFASN 120  
Db 61 YEKYQDLYTVEPNARQLVEITAARDIEKLLSNRSKALYSALAEKVOAAHQRDFASN 120  
Qy 121 EVVYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGROISYOHAAVHIPTDIYEGSTIVL 180  
Db 121 EVVYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGROISYOHAAVHIPTDIYEGSTIVL 180  
Qy 181 NELNWTSSALDEVFKKREDDPSLLWQVFGSATGLARYYPASPWDNSRTPNKIDLYDVR 240  
Db 181 NELNWTSSALDEVFKKREDDPSLLWQVFGSATGLARYYPASPWDNSRTPNKIDLYDVR 240  
Qy 241 RPWYIOGAASPKDMLILVDVSGVSGLTGLKIRTSVSEMLETSDDDDFVNVASFNSAQD 300  
Db 241 RPWYIOGAASPKDMLILVDVSGVSGLTGLKIRTSVSEMLETSDDDDFVNVASFNSAQD 300  
Qy 301 VSCFOHLYQVAVNRNKKVLLKDAVNNITAKGIDYKKGFSFAFEQLLNVSRANCNKIIML 360  
Db 301 VSCFOHLYQVAVNRNKKVLLKDAVNNITAKGIDYKKGFSFAFEQLLNVSRANCNKIIML 360  
Qy 361 FTDGGEERAQEIFNKYNKDKKVRVFRFVSGQHNYRGERGIOWMACENKGYIPEISGAIR 420  
Db 361 FTDGGEERAQEIFNKYNKDKKVRVFRFVSGQHNYRGERGIOWMACENKGYIPEISGAIR 420  
Qy 421 INTOEYLDVLGRPMVLGDKAKOVQWNTVYLDALGLVITGLTPVFNITGQFENKTNLK 480  
Db 421 INTOEYLDVLGRPMVLGDKAKOVQWNTVYLDALGLVITGLTPVFNITGQFENKTNLK 480  
Qy 481 NQLILGVMGVDVSLDIKRLTPFTLCPNGYYFAIDPNNGYVLLHPNLQPKKPSQEPVTL 540  
Db 481 NQLILGVMGVDVSLDIKRLTPFTLCPNGYYFAIDPNNGYVLLHPNLQPKKPSQEPVTL 540  
Qy 541 DFLDAELENDIKVEIRNKMIDGESGKTFRLVKSQDDRYIDKGNRTYTWTPVNGTDYSL 600  
Db 536 DFLDAELENDIKVEIRNKMIDGESGKTFRLVKSQDDRYIDKGNRTYTWTPVNGTDYSL 595  
Qy 601 ALVLPYTSFYIYKAKLEETITQARSKKGMKDSFVLKPDNFEESGYTPIAPRDCNDLKI 660  
Db 596 ALVLPYTSFYIYKAKLEETITQARSKKGMKDSFVLKPDNFEESGYTPIAPRDCNDLKI 655

QY 661 SDNTEFLNFEIDRKTNNPNSCNADLINRVLLDAGFTNELVQNWWSKQNIKGVKAR 720  
Db 656 SDNTEFLNFEIDRKTNNPNSCNADLINRVLLDAGFTNELVQNWWSKQNIKGVKAR 715  
QY 721 FVYTDGGITRVYKPEAGENWOENPEYEDSFYKRSLDNDNVYFTAPYFNKSGPGAYESGI 780  
Db 716 FVYTDGGITRVYKPEAGENWOENPEYEDSFYKRSLDNDNVYFTAPYFNKSGPGAYESGI 775  
QY 781 MYSKAVEIYIOGKLLPAVYGIKIDVNSWIENFTKTSIRDPCAGPVCDCRNSDVMDCVI 840  
Db 776 MYSKAVEIYIOGKLLPAVYGIKIDVNSWIENFTKTSIRDPCAGPVCDCRNSDVMDCVI 835  
QY 841 LDGCGFLLMANHDDYTNQIGRFGGEIDPSLMRHLVNIYSVAFNKSVDYQSVCEPGAAPKQ 900  
Db 836 LDGCGFLLMANHDDYTNQIGRFGGEIDPSLMRHLVNIYSVAFNKSVDYQSVCEPGAAPKQ 895  
QY 901 GAGHRSAYVPSVADILQIGHWATAAWSIIQQFLLSLTFFPRLLAEVEMEDDDFTASLSKQ 960  
Db 896 GAGHRSAYVPSVADILQIGHWATAAWSIIQQFLLSLTFFPRLLAEVEMEDDDFTASLSKQ 955  
QY 961 SCITEQYQFFDNDKSFSGVLDGNGCSRIHFHGEKLMNTNLIIFIMVESKGTCPDTRLLI 1020  
Db 956 SCITEQYQFFDNDKSFSGVLDGNGCSRIHFHGEKLMNTNLIIFIMVESKGTCPDTRLLI 1015  
QY 1021 QAEQTSQPNPCDMVKQPRYRKGPDVCFDNNVLEDYDCGVSGLNPSLWIYIGIQPLLL 1080  
Db 1016 QAEQTSQPNPCDMVKQPRYRKGPDVCFDNNVLEDYDCGVSGLNPSLWIYIGIQPLLL 1075  
QY 1081 WLVSQSTHRL 1091  
Db 1076 WLVSQSTHRL 1086

RESULT 9

US-08-455-543A-56  
; Sequence 56, Application US/08455543A  
; Patent No. 5792846  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FastSeq Version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/455,543A  
; FILING DATE: May 31, 1995  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/223,305  
; FILING DATE: April 4, 1994  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/868,354  
; FILING DATE: April 10, 1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/620,250  
; FILING DATE: 30-NOV-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/482,384  
; FILING DATE: 20-FEB-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/US89/01408  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/176,899  
; FILING DATE: 04-APR-1988  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 6362-52517  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 56:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1084 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FRAGMENT TYPE: internal  
; US-08-455-543A-56

Query Match 99.0%; Score 5691.5; DB 1; Length 1084;

Best Local Similarity 99.3%; Pred. No. 0;

Matches 1083; Conservative 0; Mismatches 1; Indels 7; Gaps 1;

QY 1 MAAGCLLALTLTLFQSLIGPSSEEPSPSAVTIKSWYDKMQEDLVTLAKTASGYNQLVDI 60  
Db 1 MAAGCLLALTLTLFQSLIGPSSEEPSPSAVTIKSWYDKMQEDLVTLAKTASGYNQLVDI 60  
QY 61 YEKYQDLYTVEPNAROLVEIARDEKLLSNRSKALVSLALEAEKVQAAHQRDEFSN 120  
Db 61 YEKYQDLYTVEPNAROLVEIARDEKLLSNRSKALVSLALEAEKVQAAHQRDEFSN 120  
QY 121 EVVYNAKDDLDPEKNDSEPGSORIKPVFIEDANFGRIQISYQHAHVHPTDIYSGTIVL 180  
Db 121 EVVYNAKDDLDPEKNDSEPGSORIKPVFIEDANFGRIQISYQHAHVHPTDIYSGTIVL 180  
QY 181 NELNWTALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPPWVDNSRTNPKIDLYDVR 240  
Db 181 NELNWTALDEVFKKNREEDPSLLWQVFGSATGLARYYPASPPWVDNSRTNPKIDLYDVR 240  
QY 241 RPWYIOGAASPKDMLILVDYSGVSGTLAKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300  
Db 241 RPWYIOGAASPKDMLILVDYSGVSGTLAKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300  
QY 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGTDYKKGFSFAFEQQLLNYSRANCKIIML 360  
Db 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGTDYKKGFSFAFEQQLLNYSRANCKIIML 360  
QY 361 FTDGGEERAQEIENKYNKKVRFVRSVGOHNYERGIOMMACENKGYEYFISGAIR 420  
Db 361 FTDGGEERAQEIENKYNKKVRFVRSVGOHNYERGIOMMACENKGYEYFISGAIR 420  
QY 421 INTQEYLDVLGRPMVLGADKAKQVQWNTNVDLDALELGVITGLPVENITGQFENKNL 480  
Db 421 INTQEYLDVLGRPMVLGADKAKQVQWNTNVDLDALELGVITGLPVENITGQFENKNL 480  
QY 481 NQLITGVMGVDSLEDIKRLTPRETLCNPGYFAIDPNGYVLLHPNLPKNPKSQEPVTL 540  
Db 481 NQLITGVMGVDSLEDIKRLTPRETLCNPGYFAIDPNGYVLLHPNLPKNPKSQEPVTL 540  
QY 541 DFLDAELENDIKVEIRKNMKIDGESGEKTFRTLVKYSQDERYIDKGNRTYTTWTPVNGTDYSL 600

Db 541 DFLDALENDIKVEIRNMKGIDGSEKTFITLVKSQDERYIDKGNRTYTTPVNGTDYSL 600  
QY 601 ALVLTPTSYFYIKALEETITQARSKKGMKQSETLKPDPNFEEGTYTFIAPRYCNDLKI 660  
Db 601 ALVLTPTSYFYIKALEETITQARY-----SETLKPDPNFEEGTYTFIAPRYCNDLKI 653  
QY 661 SDNTEFLNFEIDRKTNNPNSCNADLINRVLLDAGFTNELVQNSKQKNIKVYKAR 720  
Db 654 SDNTEFLNFEIDRKTNNPNSCNADLINRVLLDAGFTNELVQNSKQKNIKVYKAR 713  
QY 721 FVYTDGGITRVYKPEAGENQENPETEYDSFYKRSLDNDNYVTAPYFNKSGPGAYESGI 780  
Db 714 FVYTDGGITRVYKPEAGENQENPETEYDSFYKRSLDNDNYVTAPYFNKSGPGAYESGI 773  
QY 781 MVSKAIVEIYIOGKLLPAVYIGIDVNSWIENTKTSIRPCAGPVCDCRNSDVMDCVI 840  
Db 774 MVSKAIVEIYIOGKLLPAVYIGIDVNSWIENTKTSIRPCAGPVCDCRNSDVMDCVI 833  
QY 841 LDGGLFLMANHDDYTNQIGRFTGEIDPMSLRHLNLSVYAFNKSVDYQVSCBPGAPKQ 900  
Db 834 LDGGLFLMANHDDYTNQIGRFTGEIDPMSLRHLNLSVYAFNKSVDYQVSCBPGAPKQ 893  
QY 901 GAGHRSAYVPSVADILQIGWATAAASWILQOFLLSITFPRLLAEVEMEDDDTASLSKQ 960  
Db 894 GAGHRSAYVPSVADILQIGWATAAASWILQOFLLSITFPRLLAEVEMEDDDTASLSKQ 953  
QY 961 SCITEQTYFFDNDKSFSGVLCGNCGRIFHGEKLMNTNLIFIMVESKTCPCDTRLLI 1020  
Db 954 SCITEQTYFFDNDKSFSGVLCGNCGRIFHGEKLMNTNLIFIMVESKTCPCDTRLLI 1013  
QY 1021 QAEQTSQDPNCPDMVQPRYKRGPDVCFDNNVLEDYDCGGVSGLNPSLWYIIGIOFLLL 1080  
Db 1014 QAEQTSQDPNCPDMVQPRYKRGPDVCFDNNVLEDYDCGGVSGLNPSLWYIIGIOFLLL 1073  
QY 1081 WLVSQSTHRL 1091  
Db 1074 WLVSQSTHRL 1084

RESULT 10  
US-08-223-305C-56  
; Sequence 56, Application US/08223305C  
; Patent No. 5851824  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; METHOD OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FastSeq Version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/223,305C  
; FILING DATE: April 4, 1994  
; PRIOR APPLICATION DATA:  
; FILING DATE: April 10, 1992  
; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/620,250  
; FILING DATE: 30-NOV-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/482,384  
; FILING DATE: 20-FEB-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/US89/01408  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/176,899  
; FILING DATE: 04-APR-1988  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 52516 (P519739)  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 56:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1084 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FRAGMENT TYPE: Internal  
; US-08-223-305C-56

Query Match 99.0%; Score 5691.5; DB 2; Length 1084;  
Best Local Similarity 99.3%; Pred. No. 0;  
Matches 1083; Conservative 0; Mismatches 1; Indels 7; Gaps 1;

QY 1 MAAGCLLALTTLTFLQSLLIGPSSEEPFPPSAVTIKSWDKMQEDLVTLAKTASGVNQLVDI 60  
Db 1 MAAGCLLALTTLTFLQSLLIGPSSEEPFPPSAVTIKSWDKMQEDLVTLAKTASGVNQLVDI 60  
QY 61 YEKYQDLYTVEPNNAQRLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQRDEFSN 120  
Db 61 YEKYQDLYTVEPNNAQRLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQRDEFSN 120  
QY 121 EVVYNAKDDLDPEKNDSEPGSORIKPVFTEDANFGQISYQHAHVHIPTDIYEGSTIVL 180  
Db 121 EVVYNAKDDLDPEKNDSEPGSORIKPVFTEDANFGQISYQHAHVHIPTDIYEGSTIVL 180  
QY 181 NELNWTSSALDEVEFKKNEEDPSSLQWVFGSATGLARYYPASPPWVDSNRTNPKIDLYDVR 240  
Db 181 NELNWTSSALDEVEFKKNEEDPSSLQWVFGSATGLARYYPASPPWVDSNRTNPKIDLYDVR 240  
QY 241 RPWYIOGAASPKDMLILVDVSGVSGTLTKLIRTSVSEMLETISDDDFVNVASFNSNAQD 300  
Db 241 RPWYIOGAASPKDMLILVDVSGVSGTLTKLIRTSVSEMLETISDDDFVNVASFNSNAQD 300  
QY 301 VSCFQHLVQANVRNKKVLDVANNITAKGITYDKGFSFAFEOQLLNYSRANCNKIIML 360  
Db 301 VSCFQHLVQANVRNKKVLDVANNITAKGITYDKGFSFAFEOQLLNYSRANCNKIIML 360  
QY 361 FTDGGEERAQEIFNKYKDKKVRFRFSVQGHNYERGPQIOWMACENKGYIYEIPSGAIR 420  
Db 361 FTDGGEERAQEIFNKYKDKKVRFRFSVQGHNYERGPQIOWMACENKGYIYEIPSGAIR 420  
QY 421 INTQEYLDVLRPMVLAGKAKQVQNTNYDLDALEGLVITGTLPVFNITGTQENKTNLK 480  
Db 421 INTQEYLDVLRPMVLAGKAKQVQNTNYDLDALEGLVITGTLPVFNITGTQENKTNLK 480  
QY 481 NOLLILGVMGVDSVLESDIKRLTTPFTLCNPGYFAIDPNGYVLLHPNLOPKNPKSQEPVTL 540

Db 481 NQILGVMGVDSLEDIKRLTPRTLCPCNGYFAIDPNCVLLHPNLQPKNPKSQEPVTL 540  
QY 541 DFDAELENDIKVEIRNKMGDSGEKTRTLVKSODERYIDKGNRTYTWTPVNGTDYSL 600  
Db 541 DFDAELENDIKVEIRNKMGDSGEKTRTLVKSODERYIDKGNRTYTWTPVNGTDYSL 600  
QY 601 ALVLPYSFYIKAKLEETITQARSKKGMKDSSETLKPONFESGYTFIAPRDYCNLDKI 660  
Db 601 ALVLPYSFYIKAKLEETITQARY-----SETLKPONFESGYTFIAPRDYCNLDKI 653  
QY 661 SDNTEFLNFEIDRKTNNPNSCNADLINRVLLDAGFTNELVQYWSKQKNIKGVKAR 720  
Db 654 SDNTEFLNFEIDRKTNNPNSCNADLINRVLLDAGFTNELVQYWSKQKNIKGVKAR 713  
QY 721 FVYTDGGITRVYKPEAGENWQENPETIYDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
Db 714 FVYTDGGITRVYKPEAGENWQENPETIYDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 773  
QY 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSWENFTKTSIRPCAGPVCDCKRNSDVMDCVI 840  
Db 774 MYSKAVEIYIOGKLLKPAVVGKIDVNSWENFTKTSIRPCAGPVCDCKRNSDVMDCVI 833  
QY 841 LDDGGFLMANHDDYTNQIGRFFGEIDPSLMRHLNIVSYAFNKSVDYOSVCEPGAAPKQ 900  
Db 834 LDDGGFLMANHDDYTNQIGRFFGEIDPSLMRHLNIVSYAFNKSVDYOSVCEPGAAPKQ 893  
QY 901 GAGHRSAVPSVADIQIGWATAAAMSILQOFLSLTPRLLLEAVEMEDDDFTASLSKQ 960  
Db 894 GAGHRSAVPSVADIQIGWATAAAMSILQOFLSLTPRLLLEAVEMEDDDFTASLSKQ 953  
QY 961 SCITEQTOYFFDNDSKFSGLDGCNCRIFHCEKLMNTNLIIFIMVESGTCPCDTRLLI 1020  
Db 954 SCITEQTOYFFDNDSKFSGLDGCNCRIFHCEKLMNTNLIIFIMVESGTCPCDTRLLI 1013  
QY 1021 QAEQTSQSDGPNPCDMVKQPRYKGPDPVCFDNNVLEDYDCGGVSGNPLSLWYIIGIOFLLL 1080  
Db 1014 QAEQTSQSDGPNPCDMVKQPRYKGPDPVCFDNNVLEDYDCGGVSGNPLSLWYIIGIOFLLL 1073  
QY 1081 WLVSSTHRL 1091  
Db 1074 WLVSSTHRL 1084

## RESULT 11

US-08-455-543A-53

; Sequence 53, Application US/0845543A

; Patent No. 5792846

; GENERAL INFORMATION:

; APPLICANT: Harpold, Michael

; APPLICANT: Ellis, Steven

; APPLICANT: Williams, Mark

; APPLICANT: Feldman, Daniel

; APPLICANT: McCue, Ann

; APPLICANT: Brenner, Robert

; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND

; TITLE OF INVENTION: METHODS

; NUMBER OF SEQUENCES: 57

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Brown, Martin, Haller &amp; McClain

; STREET: 1660 Union Street

; CITY: San Diego

; STATE: California

; COUNTRY: USA

; ZIP: 92101-2926

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Diskette

; COMPUTER: IBM Compatible

; OPERATING SYSTEM: DOS

; SOFTWARE: FastSeq Version 1.5

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/455,543A

; FILING DATE: May 31, 1995

; PRIOR APPLICATION DATA:

;

;

;

;

;

APPLICATION NUMBER: 08/223,305  
FILING DATE: April 4, 1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 6362-52517  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 53:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1103 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
US-08-455-543A-53

## Query Match

Best Local Similarity 98.7%; Score 5672; DB 1; Length 1103;

Matches 1083; Conservative 0; Mismatches 1; Indels 26; Gaps 2;

QY 1 MAAGCLLALTLTFLQSLLLIGPSSEEPFSAVTIKSWDKMQEDLVTLAKTASGVNQLVDI 60  
Db 1 MAAGCLLALTLTFLQSLLLIGPSSEEPFSAVTIKSWDKMQEDLVTLAKTASGVNQLVDI 60  
QY 61 YEKYQDLYTVEPNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQRDFASN 120  
Db 61 YEKYQDLYTVEPNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQRDFASN 120  
QY 121 EYVYNAKDDLPEDKNDSPGQRIKPVIEDANFGQISYQHAHVHIPTDIYEGSTIVL 180  
Db 121 EYVYNAKDDLPEDKNDSPGQRIKPVIEDANFGQISYQHAHVHIPTDIYEGSTIVL 180  
QY 181 NELNMTSALDEVFKKNREEDPSLLMQVFGSATGLARYYPASPMVDNSRTPNKIDLYDVR 240  
Db 181 NELNMTSALDEVFKKNREEDPSLLMQVFGSATGLARYYPASPMVDNSRTPNKIDLYDVR 240  
QY 241 RPWYIQGAASPKDMLILVDVSGVSLTLKLTISVSEMLETLSDDDDFNVASFNSNAQD 300  
Db 241 RPWYIQGAASPKDMLILVDVSGVSLTLKLTISVSEMLETLSDDDDFNVASFNSNAQD 300  
QY 301 VSCFOHLVQANVRNKKVLKADVNNITAKGIDYKKGFSFAFOLLNLYNSRANCNIIML 360  
Db 301 VSCFOHLVQANVRNKKVLKADVNNITAKGIDYKKGFSFAFOLLNLYNSRANCNIIML 360  
QY 361 FTDGGEERAQEIFNKYKNDKVRVFRFSYQHNRYEGPIQWACENKGYIYEIPISGAIR 420  
Db 361 FTDGGEERAQEIFNKYKNDKVRVFRFSYQHNRYEGPIQWACENKGYIYEIPISGAIR 420



QY 421 INTQYELVLRPMVLADGKAKQVQWYNYLDALGLVITGTLFVFNITGOFENKTNLK 480  
Db 421 INTQYELVLRPMVLADGKAKQVQWYNYLDALGLVITGTLFVFNITGOFENKTNLK 480  
QY 481 NOLILGVMGVDVSLIEDIKRLPRFTLCPCNGYYFAIDPBGYVLLHNPLOPK----- 530  
Db 481 NOLILGVMGVDVSLIEDIKRLPRFTLCPCNGYYFAIDPBGYVLLHNPLOPKPGPIGVGPIPTIN 540  
QY 531 -----NPKSQBPVTLDFDLDALENDIKVEIRKMKIDGESGKTFRTLVKSODERYI 581  
Db 541 LKRRPNIONPKSQBPVTLDFDLDALENDIKVEIRKMKIDGESGKTFRTLVKSODERYI 600  
QY 582 DKGNTYTWTPVNGDYSLALVLPYSYIYAKALEETITQARSKKGMKOSETLKPONF 641  
Db 601 DKGNTYTWTPVNGDYSLALVLPYSYIYAKALEETITQARY-----SETLKPONF 653  
QY 642 EBSGTYTAPRYCNDLKISDNTTEFLNFEFIDRKTPNPNPCNADLINRVLLDAGTIN 701  
Db 654 EBSGTYTAPRYCNDLKISDNTTEFLNFEFIDRKTPNPNPCNADLINRVLLDAGTIN 713  
QY 702 ELVQYWSKQKNIGKVFVVDGGITRVYPKEAGENQWENPETYEDSFYKRSLDNDNY 761  
Db 714 ELVQYWSKQKNIGKVFVVDGGITRVYPKEAGENQWENPETYEDSFYKRSLDNDNY 773  
QY 762 VFTAFYFNKSGPGAYESGIMVSKAVEIYIOGKLLKPAVVGKIDVNSWIENTFTKTSIRDP 821  
Db 774 VFTAFYFNKSGPGAYESGIMVSKAVEIYIOGKLLKPAVVGKIDVNSWIENTFTKTSIRDP 833  
QY 822 CAGPVCDCRNSDVMDCVILDDGGFLMANHDDYINQIGRFFGETDPSIMRHLVNSIYA 881  
Db 834 CAGPVCDCRNSDVMDCVILDDGGFLMANHDDYINQIGRFFGETDPSIMRHLVNSIYA 893  
QY 882 FNKSYDYQSVCEPGAAPKOGAGHRSAYVPSVADILQIGWATAAWSILOQFLSLTTPR 941  
Db 894 FNKSYDYQSVCEPGAAPKOGAGHRSAYVPSVADILQIGWATAAWSILOQFLSLTTPR 953  
QY 942 LLEAVEMEDDDFTASLSKSCITEQTOTQFFDNDSFSGVLDCGNCRIFFHGEKLMNTNL 1001  
Db 954 LLEAVEMEDDDFTASLSKSCITEQTOTQFFDNDSFSGVLDCGNCRIFFHGEKLMNTNL 1013  
QY 1002 IFIMVESKGTCPCDTRLIIQAEQTSQSDGNPCDMVKQPRYKGPVDFVNNVLEDYTDGCG 1061  
Db 1014 IFIMVESKGTCPCDTRLIIQAEQTSQSDGNPCDMVKQPRYKGPVDFVNNVLEDYTDGCG 1073  
QY 1062 VSGLNPSLWYIIGIOFLMLVLSGSTRLL 1091  
Db 1074 VSGLNPSLWYIIGIOFLMLVLSGSTRLL 1103

RESULT 12  
US-08-223-305C-53  
; Sequence 53, Application US/08223305C  
; Patent No. 5851824  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible

OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq Version 1.5  
CURRENT APPLICATION DATA: US/08/223.305C  
APPLICATION NUMBER: US/08/223.305C  
FILING DATE: April 4, 1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 52516 (P519739)  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0062  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 53:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1103 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
US-08-223-305C-53

Query Match 98.7%; Score 5672; DB 2; Length 1103;  
Best Local Similarity 97.6%; Pred. No. 0;  
Matches 1083; Conservative 0; Mismatches 1; Indels 26; Gaps 2;  
QY 1 MAAGCLLALTTLFQSLIGPSSSEPPFSAVTIKSWDKMOEDLVTLAKTAGVGNQLVDI 60  
Db 1 MAAGCLLALTTLFQSLIGPSSSEPPFSAVTIKSWDKMOEDLVTLAKTAGVGNQLVDI 60  
QY 61 YEKYODLYTVEPNARQLVEIAARDIEKLLNSRKALVSLALEAEKVQAAHQWREDFASN 120  
Db 61 YEKYODLYTVEPNARQLVEIAARDIEKLLNSRKALVSLALEAEKVQAAHQWREDFASN 120  
QY 121 EWYVYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGROISYQHAHVHPTDIYEGSTIVL 180  
Db 121 EWYVYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGROISYQHAHVHPTDIYEGSTIVL 180  
QY 181 NELNWT SALDEVFKKNREDDPSLLQVFGSATGLARYYPASPWDNSRTPNKIDLYDVR 240  
Db 181 NELNWT SALDEVFKKNREDDPSLLQVFGSATGLARYYPASPWDNSRTPNKIDLYDVR 240  
QY 241 RPWYIQGAASPKDMLILVDVSGVSGLTGLKIRTSVSEMLETSLDDDFVNVASFNSNAQD 300  
Db 241 RPWYIQGAASPKDMLILVDVSGVSGLTGLKIRTSVSEMLETSLDDDFVNVASFNSNAQD 300  
QY 301 VSCFOHLVQAVNRNKKVLDKAVNNITAKGIDYKKGFSFAFQOLLNVNVRANCNKIIML 360  
Db 301 VSCFOHLVQAVNRNKKVLDKAVNNITAKGIDYKKGFSFAFQOLLNVNVRANCNKIIML 360  
QY 361 FTDGGEERAQEIFNKNKDKKRVFRFSVQGHNYERGPIONMACENKGYIYEIPSIGAIR 420

Db 361 FTGGGAEAEIENKKNKKVRFSGQHNYERGPQWACENKGYIIEPSIGAIR 420  
QY 421 INTQEYLDVLRPMVLGAKQVQVNTYLDLDAELGLVITGTLPVFNITGOFENKTNLK 480  
Db 421 INTQEYLDVLRPMVLGAKQVQVNTYLDLDAELGLVITGTLPVFNITGOFENKTNLK 480  
QY 481 NQILGVMGVDVSLDIKRLTPRFTLCPNGYFAIDPNNGYVLLHPLNLPK- 530  
Db 481 NQILGVMGVDVSLDIKRLTPRFTLCPNGYFAIDPNNGYVLLHPLNLPK- 540  
QY 531 -----NPKSQEPVTLDFDAELNDIKVEIRNKMIDGESGKFTFLVKSQDERYI 581  
Db 541 LKRRRNIONPKSQEPVTLDFDAELNDIKVEIRNKMIDGESGKFTFLVKSQDERYI 600  
QY 582 DKGNRITYTTPVNGTDYSLALVLPYSFYIYKAKLEETITQARSKKMKDSETLKPNDF 641  
Db 601 DKGNRITYTTPVNGTDYSLALVLPYSFYIYKAKLEETITQARY-----SETLKPNDF 653  
QY 642 EESGYTFIAPRDCNDLKISDNNTEFLNFEIDRKTNNPSCNADLINRVLLDAGFTN 701  
Db 654 EESGYTFIAPRDCNDLKISDNNTEFLNFEIDRKTNNPSCNADLINRVLLDAGFTN 713  
QY 702 ELQNTYWSKQKNIKGKARFVYTDGGITRVYKAEAGENNQENPETYEDSFYKRSLDNDNY 761  
Db 714 ELQNTYWSKQKNIKGKARFVYTDGGITRVYKAEAGENNQENPETYEDSFYKRSLDNDNY 773  
QY 762 VFTAPYFNKSGGAYESGIMVSKAVEIYIOGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 821  
Db 774 VFTAPYFNKSGGAYESGIMVSKAVEIYIOGKLLKPAVVGIKIDVNSWIENFTKTSIRDP 833  
QY 822 CAGPVCDCRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNIISVYA 881  
Db 834 CAGPVCDCRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNIISVYA 893  
QY 882 FNKSYDQSVCEPGAAPKQAGHRSAYVPSVADILQIGWATAAASIIQOFLLSLTFFR 941  
Db 894 FNKSYDQSVCEPGAAPKQAGHRSAYVPSVADILQIGWATAAASIIQOFLLSLTFFR 953  
QY 942 LLEAVEMEDDDFTASLSKQSCITEQYQFFDNDKSFSGVLDCGNCRIFFHGEKLMNTNL 1001  
Db 954 LLEAVEMEDDDFTASLSKQSCITEQYQFFDNDKSFSGVLDCGNCRIFFHGEKLMNTNL 1013  
QY 1002 IFIMVESKTCPCDTELLLOAQESQSDGNPNCMDVKQPRYKGPVDFCNVLEDYTDGCG 1061  
Db 1014 IFIMVESKTCPCDTELLLOAQESQSDGNPNCMDVKQPRYKGPVDFCNVLEDYTDGCG 1073  
QY 1062 VSGLNPSLWYIIGIQFLLLWLVSGSTHRL 1091  
Db 1074 VSGLNPSLWYIIGIQFLLLWLVSGSTHRL 1103

RESULT 13  
US-08-455-543A-55  
; Sequence 55, Application US/08455543A  
; Patent No. 5792846  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESS: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926

COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/455,543A  
FILING DATE: May 31, 1995  
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APPLICATION NUMBER: 08/223,305  
FILING DATE: April 4, 1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
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APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
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PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
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PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 6362-52517  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 55:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1079 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
US-08-455-543A-55

Query Match 98.3%; Score 5652; DB 1; Length 1079;  
Best Local Similarity 98.8%; Pred. No. 0;  
Matches 1078; Conservative 0; Mismatches 1; Indels 12; Gaps 2;  
QY 1 MAAGCILLALTTLFOSLLIGPSSPEPPPSAVTIKSWDKMQEDLVTLAKTASGVNQLVDI 60  
Db 1 MAAGCILLALTTLFOSLLIGPSSPEPPPSAVTIKSWDKMQEDLVTLAKTASGVNQLVDI 60  
QY 61 YEKYQDLYTVEPNNAQOLVEIAARDIEKLLSNRKSALVSLAEAEKVQAAHWRDFASN 120  
Db 61 YEKYQDLYTVEPNNAQOLVEIAARDIEKLLSNRKSALVSLAEAEKVQAAHWRDFASN 120  
QY 121 EYVYINAKDDLDPKNDSEPGSQRIKPVFIEDANFGRIQISYQHAHVHIPTDIYEGSTIVL 180  
Db 121 EYVYINAKDDLDPKNDSEPGSQRIKPVFIEDANFGRIQISYQHAHVHIPTDIYEGSTIVL 180  
QY 181 NELNMTSALDEYFKKNREEDPSLLMQVFGSATGLARYYPASVPWVNSRTPNKIDLYDVR 240  
Db 181 NELNMTSALDEYFKKNREEDPSLLMQVFGSATGLARYYPASVPWVNSRTPNKIDLYDVR 240  
QY 241 RPYITQGAASPKDMLTLVDVSGVSLTLLKLTYSVSEMLETLSDDDFYNVASFNSNAOD 300  
Db 241 RPYITQGAASPKDMLTLVDVSGVSLTLLKLTYSVSEMLETLSDDDFYNVASFNSNAOD 300

QY 301 VSCFQHLVQANVRNKKVLDVANNITAKGIDYKKGFSAFQQLLNYNVSRANCKNIIML 360  
Db 301 VSCFQHLVQANVRNKKVLDVANNITAKGIDYKKGFSAFQQLLNYNVSRANCKNIIML 360  
QY 361 FTDGGERAQEILFNKYNKDKVYRFVSQGHYERGPIONMACENKGYIYIPIPSIGAIR 420  
Db 361 FTDGGERAQEILFNKYNKDKVYRFVSQGHYERGPIONMACENKGYIYIPIPSIGAIR 420  
QY 421 INTQYLDVLGRPMVLGAKAKQVQWNTYLDALGLVITGLPVNITGQFENKTNLK 480  
Db 421 INTQYLDVLGRPMVLGAKAKQVQWNTYLDALGLVITGLPVNITGQFENKTNLK 480  
QY 481 NOLLILGVMDVSLDIKRLTFRFLCPNGYFAIDPNGYVLLHNPQNPKSQEPVTL 540  
Db 481 NOLLILGVMDVSLDIKRLTFRFLCPNGYFAIDPNGYVLLHNPQNPKSQEPVTL 540  
QY 541 DFLDALENDIKVEIRNKMIDGSEKTEKTRTLVKSDERYIDKGNRTYTWTPVNGTDYSL 600  
Db 536 DFLDALENDIKVEIRNKMIDGSEKTEKTRTLVKSDERYIDKGNRTYTWTPVNGTDYSL 595  
QY 601 ALVLPYTFYIIKALEETITQARSKKGMKDSKSETLKPDPNFESGYTFTAPRDYCNLDKI 660  
Db 596 ALVLPYTFYIIKALEETITQARSKKGMKDSKSETLKPDPNFESGYTFTAPRDYCNLDKI 648  
QY 661 SONTEFLNFEIDRKTTPNPNPCNADLINRVLLDAGFTNELVQYNSKQKNIKGVKAR 720  
Db 649 SONTEFLNFEIDRKTTPNPNPCNADLINRVLLDAGFTNELVQYNSKQKNIKGVKAR 708  
QY 721 FVYTDGTRVYPKEAGENWQENPETYEDSFYKRSILDNDNYFTAPYFNKSGPGAYESGI 780  
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QY 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSNIENFTKTSIRDPCAGVPVCDCKRNSDVNDVCI 840  
Db 769 MYSKAVEIYIOGKLLKPAVVGKIDVNSNIENFTKTSIRDPCAGVPVCDCKRNSDVNDVCI 828  
QY 841 LDGQFLMANHDDYTNQIGREFGEIDPSLMRHLNYSVIAFNKSYDYQSVCEPGAAPKQ 900  
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QY 901 GAGHSAYVPSVADILQIGWATAAWSLLOQFLSLTPRLEAVEDEDDFTASLSKQ 960  
Db 889 GAGHSAYVPSVADILQIGWATAAWSLLOQFLSLTPRLEAVEDEDDFTASLSKQ 948  
QY 961 SCITEQTYFFDNDKSFSGVLDGNCNCSIFHGEKLMNTNLIIFIMVESKGTCPDTRLLI 1020  
Db 949 SCITEQTYFFDNDKSFSGVLDGNCNCSIFHGEKLMNTNLIIFIMVESKGTCPDTRLLI 1008  
QY 1021 QAEQSDGNPCDMVKQPRYKGPVCFDNNVLEDYTDGCGVSGLNPSLWYIIGIQFLL 1080  
Db 1009 QAEQSDGNPCDMVKQPRYKGPVCFDNNVLEDYTDGCGVSGLNPSLWYIIGIQFLL 1068  
QY 1081 WLVSQSTHRL 1091  
Db 1069 WLVSQSTHRL 1079

## RESULT 14

US-08-223-305C-55

; Sequence 55, Application US/08223305C

; Patent No. 5851824

## GENERAL INFORMATION:

; APPLICANT: Harpold, Michael

; APPLICANT: Ellis, Steven

; APPLICANT: Williams, Mark

; APPLICANT: Feldman, Daniel

; APPLICANT: McCue, Ann

; APPLICANT: Brenner, Robert

; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND

; TITLE OF INVENTION: METHODS

; NUMBER OF SEQUENCES: 57

; CORRESPONDENCE ADDRESS:

ADDRESSEE: Brown, Martin, Haller & McClain  
STREET: 1660 Union Street  
CITY: San Diego  
STATE: California  
COUNTRY: USA  
ZIP: 92101-2926  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSEQ Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/223,305C  
FILING DATE: April 4, 1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/868,354  
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APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
APPLICATION NUMBER: US 07/482,384  
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FILING DATE: 04-APR-1989  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 52516 (P519739)  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 55:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1079 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
US-08-223-305C-55

Query Match 98.3%; Score 5652; DB 2; Length 1079;

Best Local Similarity 98.8%; Fred.No.0;

Matches 1078; Conservative 0; Mismatches 1; Indels 12; Gaps 2;

QY 1 MAAGCLLALTTLFQSLIGPSSEPPFPFSAVTKSWVDKMQEDLVTLAKTAGSVNQLVDI 60  
Db 1 MAAGCLLALTTLFQSLIGPSSEPPFPFSAVTKSWVDKMQEDLVTLAKTAGSVNQLVDI 60  
QY 61 YEKYQDLYTVPEPNARQLVEIAARDIEKLLSNRSKALVSLEAEKVAQAHHQWREDFASN 120  
Db 61 YEKYQDLYTVPEPNARQLVEIAARDIEKLLSNRSKALVSLEAEKVAQAHHQWREDFASN 120  
QY 121 EVVYNAKDDLDPEKNDSEPGSQRIKPVFIEDANGROISYQHAHVHTPTDIYEGSTIVL 180  
Db 121 EVVYNAKDDLDPEKNDSEPGSQRIKPVFIEDANGROISYQHAHVHTPTDIYEGSTIVL 180  
QY 181 NELNWTSSALDEVFKKNREDDPSLLMQVFGSATGLARYYPASFPWVDSNRTPNKIDLYDVR 240  
Db 181 NELNWTSSALDEVFKKNREDDPSLLMQVFGSATGLARYYPASFPWVDSNRTPNKIDLYDVR 240

QY 241 RPYIOGAASPKDMLILVDVSGSVGLTLKLTSTVSEMLETLSDDDDFNVASFNSAOD 300  
Db 241 RPYIOGAASPKDMLILVDVSGSVGLTLKLTSTVSEMLETLSDDDDFNVASFNSAOD 300  
QY 301 VSCFQHLVQANVKNKVLKDAVNNTAKGTTDYKKGFSAFEQOLLNYSRANCNKIIML 360  
Db 301 VSCFQHLVQANVKNKVLKDAVNNTAKGTTDYKKGFSAFEQOLLNYSRANCNKIIML 360  
QY 361 FTGGERAQEIPNKYKDKKVVFRFSVQGHNYRGPQIOMACENKGYIYEIPSGAIR 420  
Db 361 FTGGERAQEIPNKYKDKKVVFRFSVQGHNYRGPQIOMACENKGYIYEIPSGAIR 420  
QY 421 INTQEYLDVLGRPMVLGAKAKOVQNTYLDLALGLVITGTPLPVNITGQFENKTLK 480  
Db 421 INTQEYLDVLGRPMVLGAKAKOVQNTYLDLALGLVITGTPLPVNITGQFENKTLK 480  
QY 481 NOLILGVMGVDSLEIDIKRLTPFTLPCNGYYPADPNNGYVLLHPNLQPKNSQEPVTL 540  
Db 481 NOLILGVMGVDSLEIDIKRLTPFTLPCNGYYPADPNNGYVLLHPNLQPKNSQEPVTL 540  
QY 541 DFLDALENDIKVEIRKMKIDGESGKTRTLVKSODERYIDKGNRTYTWTPVNGTDYSL 600  
Db 541 DFLDALENDIKVEIRKMKIDGESGKTRTLVKSODERYIDKGNRTYTWTPVNGTDYSL 600  
QY 596 ALVLPYISFYIKAKLEETITQARSKKKMKDSETLKPDNFESGYTFTAPRDYCNDLKI 648  
Db 596 ALVLPYISFYIKAKLEETITQARSKKKMKDSETLKPDNFESGYTFTAPRDYCNDLKI 648  
QY 661 SDNTEFLNFEIDRKTNPNSCNADLINRVLDDAGFTNELVQYNSKQKNIKGVKAR 720  
Db 661 SDNTEFLNFEIDRKTNPNSCNADLINRVLDDAGFTNELVQYNSKQKNIKGVKAR 720  
QY 721 FVYTDGGITRVYPKEAGENQWENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
Db 721 FVYTDGGITRVYPKEAGENQWENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
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Db 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSNIENFTKTSIRDPAGPVCDCRNSDMDCVI 840  
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Db 841 LDDGGFLMANHDDYTNQIGRFFGEIDPSLMRHLNYSIYAFNKSVDYOSVCEPGAAPKQ 900  
QY 901 GAGHSAYVPSVADILQIGWATAAWSILOQFLSLTPRLEAVEMEDDDFTASLSKQ 960  
Db 901 GAGHSAYVPSVADILQIGWATAAWSILOQFLSLTPRLEAVEMEDDDFTASLSKQ 960  
QY 961 SCITEQTYEFFDNDKSFSGVLDCCGNCRIHFHGEKLMNTNLFIMVESKGTCPDTRLLI 1020  
Db 961 SCITEQTYEFFDNDKSFSGVLDCCGNCRIHFHGEKLMNTNLFIMVESKGTCPDTRLLI 1020  
QY 1021 QAEQTSDBGPNPCDMVKQPRYKGPVDFCNVNLVYDTCGGYSGNLPSLWYIIGIOFLLL 1080  
Db 1021 QAEQTSDBGPNPCDMVKQPRYKGPVDFCNVNLVYDTCGGYSGNLPSLWYIIGIOFLLL 1080  
QY 1081 WLVSNGTHRL 1091  
Db 1081 WLVSNGTHRL 1091

RESULT 15

US-08-435-675B-5  
; Sequence 5, Application US/08435675B  
; Patent No. 5710250

GENERAL INFORMATION:

; APPLICANT: Ellis, Steven Bradley  
; APPLICANT: Williams, Mark E.  
; APPLICANT: Harpold, Michael Miller  
; APPLICANT: Schwartz, Arnold  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: CALCIUM CHANNEL COMPOSITIONS AND METHODS  
; NUMBER OF SEQUENCES: 6

CORRESPONDENCE ADDRESS:  
ADDRESSEE: Brown, Martin, Haller & McClain  
STREET: 1660 Union Street  
CITY: San Diego  
STATE: CA  
COUNTRY: USA  
ZIP: 92101-2926  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSEQ Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/435,675B  
FILING DATE: 05-MAY-1995  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/314,083  
FILING DATE: 28-SEP-1994  
APPLICATION NUMBER: US 07/914,231  
FILING DATE: 13-JUL-1992  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 08-NOV-1990  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 6362-53193  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 619-238-0999  
TELEFAX: 619-238-0062  
TELEX:  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1106 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: Internal  
US-08-435-675B-5

Query Match 95.8%; Score 5508.5; DB 1; Length 1106;

Best Local Similarity 94.7%; Pred. No. 0;

Matches 1054; Conservative 15; Mismatches 15; Indels 29; Gaps 4;

QY 1 MAAGCILLALTLLTFLFOS--LLIGPSSSEPEPPSAVTTKSWDKMOEDLVTLAKTASGVNQLV 58  
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QY 59 DIYEKYQDLYTVEPNNAQOLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDEFA 118  
Db 61 DIYEKYQDLYTVEPNNAQOLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDEFA 120  
QY 119 SNEVYVYNAKDDLPEDKNDSEPGSORIKPVFTEDANFGQISYQHAHVHIPTDIYEGSTI 178  
Db 121 SNEVYVYNAKDDLPEDKNDSEPGSORIKPVFTEDANFGQISYQHAHVHIPTDIYEGSTI 180  
QY 179 VLNELNWTLSALDEVEFKNREEDPSLLMQVFGSATGLARYYPASVPWVNSRTPNKIDLYDV 238  
Db 181 VLNELNWTLSALDEVEFKNREEDPSLLMQVFGSATGLARYYPASVPWVNSRTPNKIDLYDV 240  
QY 239 RRRPWYIOGAASPKDMLILVDVSGSVGLTLKLTSTVSEMLETLSDDDDFNVASFNSNA 298  
Db 241 RRRPWYIOGAASPKDMLILVDVSGSVGLTLKLTSTVSEMLETLSDDDDFNVASFNSNA 300  
QY 299 QDVSCFQHLVQANVKNKVLKDAVNNTAKGTTDYKKGFSAFEQOLLNYSRANCNKII 358  
Db 301 QDVSCFQHLVQANVKNKVLKDAVNNTAKGTTDYKKGFSAFEQOLLNYSRANCNKII 360  
QY 359 MLFTDGGGERAQEIPNKYKDKKVVFRFSVQGHNYRGPQIOMACENKGYIYEIPSGA 418  
Db 361 MLFTDGGGERAQEIPNKYKDKKVVFRFSVQGHNYRGPQIOMACENKGYIYEIPSGA 420

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QY 419 IRINTQEYLDVLGRPMVLADRAKQOVQWTVNVYLDALGLVITGTLPVENITGQFENKTN 478
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QY 479 LKNOLLGVNGVDVSLIEDIKRLTPRTTCPCNGYYPFAIDPNGYVLLHPNLQPK----- 530
Db 481 LKNOLLGVNGVDVSLIEDIKRLTPRTTCPCNGYYPFAIDPNGYVLLHPNLQPKPIGVGPT 540
QY 531 -----NPKQOEPVTLDFDALELNDIKVEIRKNMIDGESGEKTRTLVKSQDER 579
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QY 580 YIDKGNRTYTWTVPVNGTDY-SLALVLPYTSFYIYKAKLEETITQARSKKGMKDSSETLKP 638
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QY 639 DNFEESGYTFIAPROYCNDLKISDNNTEFLNFEFIDRKTPNNPSCNADLINRVLLDAG 698
Db 654 DNFEESGYTFIAPROYCNDLKISDNNTEFLNFEFIDRKTPNNPSCNADLINRVLLDAG 713
QY 699 FTNELQVNTWSKQKNIKGVKARFVTDGGITRVYPKEAGENQENPETVEDSFYKRSLDN 758
Db 714 FTNELQVNTWSKQKNIKGVKARFVTDGGITRVYPKEAGENQENPETVEDSFYKRSLDN 773
QY 759 DNVFTAPYFNKSGPGAYESGIMVSKAVEIYIOGKLLKPAVVVGIIKIDVNSWIENFTKTSI 818
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QY 819 RDPGAGPVCDCRNSDVMDCVILDDGGFLLMANHDDYTNOIGRFFGEIDPSLMRHLVNI 878
Db 834 RDPGAGPVCDCRNSDVMDCVILDDGGFLLMANHDDYTNOIGRFFGEIDPSLMRHLVNI 893
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Db 894 VYAFNKSIDYQSVCEPGAAPKOGAGHRSAYVPSIADILQIGHWATAAASILQOFLLSLT 953
QY 939 FPRLLEAVEMEDDDFTASLSKOSCTEQTYFFDNDKSFSGVLDGCGNCSRIHFHGEKLMN 998
Db 954 FPRLLEAVEMEDDDFTASLSKOSCTEQTYFFDNDKSFSGVLDGCGNCSRIHFHGEKLMN 1013
QY 999 TNLIFTMVESKGTCPDTRLLIQAEQTSQPNPCDMVKQPRYKGPDCVDFDNNVLEDYTD 1058
Db 1014 TNLIFTMVESKGTCPDTRLLIQAEQTSQPNPCDMVKQPRYKGPDCVDFDNNVLEDYTD 1073
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Db 1074 CGGVSGLNPSLWYIIGIQFLLWLVSGSRHCLL 1106
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Search completed: June 8, 2001, 19:37:35  
Job time: 31301 sec



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201 GTATACTGTGGAACCAATATATGCACGCCAGCTGGTAGAAATTCAGCCA 250
84 rAspIleGluLysLeuLeuSerAsnArgSerLysAlaLeuValSerLeu 100
251 GGGATATTGAAACTTCTGAGCAACAGATCTAAGCCCTGGTGAGCCTG 300
101 AlaLeuGluAlaGluLysValGlnAlaAlaHisGlnTrpArgGluAspPh 117
301 GCATTGGAAGCGGAGAAAGTTCAAGCAGCTCACCAGTGGAGAGAAGATT 350
117 eAlaSerAsnGluValValTyrTyrAsnAlaLysAspLeuAspProG 134
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134 LuLysAsnAspSerGluProGlySerGlnArgIleLysProValPheIle 150
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151 GluAspAlaAsnPheGlyArgGlnIleSerTyrGlnHisAlaAlaValH 167
451 GAAGATGCTAATTTTGACGACCAAAATATCTATCAGCACCGCAGCTCCA 500
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184 sOrpThrSerAlaLeuAspGluValPheLysLysAsnArgGluGluAsp 200
551 ACTGGCAAGTGCCTTAGATGAAGTTTTCAAAAGAATCGCGAGGAAGAC 600
201 ProSerLeuLeuTrpGlnValPheGlySerAlaThrGlyLeuAlaArgTy 217
601 CCTTCATTATTGTGGCAGGTTTGTGGCAGTGCCACTGGCCCTAGCTCGATA 650
217 rTyrProAlaSerProTrpValAspAsnSerArgThrProAsnLysIleA 234
651 TTATCCAGCTTCACCATGGTGTGATAATAGTAGAACTCCAAATAAGATTG 700
234 sPLeuTyrAspValArgArgProTrpTyrIleGlnGlyAlaAlaSer 250
701 ACCTTTATGATGTACGCAGAGACCATGGTACATCCAAAGAGCTGCATCT 750
251 ProLysAspMetLeuIleLeuValAspValSerGlySerValSerGlyLe 267
751 CCTAAACACATGCTTATCTGTGGTGTGAGTGAAGTCTAGTGGATT 800
267 uThrLeuLysLeuIleArgThrSerValSerGluMetLeuGluThrLeu 284
801 GACACTTAAACTGATCGCAACATCTGTCTCCGAAATGTTAGAAACCCCTCT 850
284 eRAspAspAspPheValAsnValAlaSerPheAsnSerAsnAlaGlnAsp 300
851 CAGATGATGATTTCGTGAATGTAGCTTCATTTAACAGCAATGCTCAGGAT 900
301 ValSerCysPheGlnHisLeuValGlnAlaAsnValArgAsnLysLysVa 317
901 GTAGCTGTTTTCAGCACCTTGTCACAGCAAAATGTAGAATAATAAAGT 950
317 lLeuLysAspAlaValAsnAsnIleThrAlaLysGlyIleThrAspTyrL 334
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517 oAsnGlyTyrValLeuLeuHisProAsnLeuGlnProLysAsnProLys 534
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601 AlaLeuValLeuProThrTyrSerPheTyrTyrIleLysAlaLysLeuGl 617
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3201 CTCCTCTGTGTATATCATTTGGAATCCAGTTTCTACTACTTTGCTGTGTAT 3250
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3251 CTGGCAGCACACCGGCTGTTA 3273

seq_name: /cgn2_6/ptodata/2/lna/5B_COMB.seq: US-08-311-363-24

seq_documentation_block:
; Sequence 24, Application US/08311363
; Patent No 587698
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: Feldman, Daniel
; APPLICANT: McCue, Ann
; APPLICANT: Brenner, Robert
; TITLE OF INVENTION: Human Calcium Channel Compositions and
; TITLE OF INVENTION: Methods
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSER: Brown, Martin, Haller & McClain
; STREET: 1660 Union Street
; CITY: San Diego
; STATE: California
; COUNTRY: USA
; ZIP: 92101-2926
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/311,363
; FILING DATE:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/745,206
; FILING DATE: 15-AUG-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Seidman, Stephanie L.
; REGISTRATION NUMBER: 33,779
; REFERENCE/DOCKET NUMBER: 6362-51506
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1551 TAATGGTTATGTTTATTACATCCAAATCTTCAGCCAAAAGACCCCAAT 1600  
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; GENERAL INFORMATION:

; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert

alignment\_scores:

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TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
TITLE OF INVENTION: METHODS  
NUMBER OF SEQUENCES: 57  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Brown, Martin, Hallier & McClain  
STREET: 1660 Union Street  
CITY: San Diego  
STATE: California  
COUNTRY: USA  
ZIP: 92101-2926  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/455,543A  
FILING DATE: May 31, 1995  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/223,305  
FILING DATE: April 4, 1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
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FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
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REFERENCE/DOCKET NUMBER: 6362-52517  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
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; Patent No. 5846757
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: Feldman, Daniel
; APPLICANT: McCue, Ann
; APPLICANT: Brenner, Robert
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND
; TITLE OF INVENTION: METHODS
; NUMBER OF SEQUENCES: 29
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BROWN, MARTIN, HALLER & MCCLAIN
; STREET: 1660 UNION STREET
; CITY: SAN DIEGO
; STATE: CA
; COUNTRY: USA
; ZIP: 92101
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA: US/08/193,078B
APPLICATION NUMBER: US/08/193,078B
FILING DATE: 07-FEB-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/868,354
FILING DATE: 10-APR-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/745,206
FILING DATE: 15-AUG-1991
ATTORNEY/AGENT INFORMATION:
NAME: Seidman, Stephanie L.
REGISTRATION NUMBER: 33,779
REFERENCE/DOCKET NUMBER: 6362-53607
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-238-0999
TELEFAX: 619-238-0062
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 3600 base pairs
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TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
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LOCATION: 35..3310
OTHER INFORMATION: /standard_name="Alpha-2b"
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FEATURE:
NAME/KEY: 3'UTR
LOCATION: 3308..3600
US-08-193-078B-11

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Ratio: 5.269 Gaps: 0
Percent similarity: 100.000 Percent identity: 100.000

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Align seg 1/1 to: US-08-193-078B-11 from: 1 to: 3600

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; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
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; APPLICATION NUMBER: US/08/223,305C  
; FILING DATE: April 4, 1994  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/868,354  
; FILING DATE: April 10, 1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/620,250  
; FILING DATE: 30-NOV-1990  
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; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/US89/01408  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/176,899  
; FILING DATE: 04-APR-1988  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 52516 (P519739)  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 33:  
; SEQUENCE CHARACTERISTICS:  
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; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: Feldman, Daniel
; APPLICANT: McCue, Ann
; APPLICANT: Brenner, Robert
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND
; TITLE OF INVENTION: METHODS
; NUMBER OF SEQUENCES: 40
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Brown, Martin, Haller & McClain
; STREET: 1660 Union Street
; CITY: San Diego
; STATE: California
; COUNTRY: USA
; ZIP: 92101-2926
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; FILING DATE: 03-NOV-1993
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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/105,536
; FILING DATE: 11-AUG-1993
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; APPLICATION NUMBER: WO PCT/US92/06903
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; APPLICATION NUMBER: US 07/914,231
; FILING DATE: 13-JUL-1992
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; FILING DATE: 10-APR-1992
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; FILING DATE: 15-AUG-1991
; PRIOR APPLICATION DATA:
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; PRIOR APPLICATION DATA:
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; FILING DATE: 04-APR-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/176,899
; FILING DATE: 04-APR-1988
; ATTORNEY/AGENT INFORMATION:
; NAME: Seidman, Stephanie L.
; REGISTRATION NUMBER: 33,779
; REFERENCE/DOCKET NUMBER: 6362-55038
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619) 238-0999
; TELEFAX: (619) 238-0062
; INFORMATION FOR SEQ ID NO: 11:
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GENERAL INFORMATION:
APPLICANT: Harpold, Michael
APPLICANT: Ellis, Steven
APPLICANT: Williams, Mark
APPLICANT: McCue, Ann
APPLICANT: Gillespie, Allison
TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND
METHODS
TITLE OF INVENTION: METHODS
NUMBER OF SEQUENCES: 38
CORRESPONDENCE ADDRESS:
ADDRESSEE: Brown, Martin, Haller & McClain
STREET: 1660 Union Street
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STATE: California
COUNTRY: US
ZIP: 92101
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/949,386
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/290,012
FILING DATE: 11-AUG-1994
APPLICATION NUMBER: 08/149,097
FILING DATE: 5-NOV-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/105,536
FILING DATE: 11-AUG-1993
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INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
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STRANDEDNESS: double
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US-08-949-386-11

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; Patent No. 6096514
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: McCue, Ann
; APPLICANT: Gillespie, Allison
; APPLICANT: Feldman, Daniel
; APPLICANT: Brenner, Robert
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND
; TITLE OF INVENTION: METHODS
; NUMBER OF SEQUENCES: 38
; CORRESPONDENCE ADDRESS:
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; ZIP: 92101
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/450,562
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  APPLICATION NUMBER: 08/336,257
  FILING DATE: 7-NOV-1994
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    FILING DATE: 28-SEPT-1994
  APPLICATION DATA:
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    FILING DATE: 23-SEPT-1994
  APPLICATION DATA:
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    FILING DATE: 11-AUG-1994
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    FILING DATE: 5-NOV-1993
  APPLICATION DATA:
    APPLICATION NUMBER: 08/105,536
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    FILING DATE: 04-APR-1989
  APPLICATION DATA:
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    FILING DATE: 04-APR-1988
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  NAME: Seidman, Stephanie L.
  REGISTRATION NUMBER: 33,779
  REFERENCE/DOCKET NUMBER: 6362-519812
TELECOMMUNICATION INFORMATION:
  TELEPHONE: (619) 238-0999
  TELEFAX: (619) 238-0062
  INFORMATION FOR SEQ ID NO: 11:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 3600 base pairs
      TYPE: nucleic acid
      STRANDEDNESS: double
      TOPOLOGY: linear
      MOLECULE TYPE: DNA (genomic)
      FEATURE:
        NAME/KEY: CDS
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        OTHER INFORMATION: /standard_name= "Alpha-2"
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alignment_scores:
  Quality: 5748.00      Length: 1091
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alignment_block:
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; Sequence 3, Application US/08713118
; Patent No. 6040436
; GENERAL INFORMATION:
; APPLICANT: Franco, Rodrigo
; APPLICANT: Sun Chen, Ai Ru
; APPLICANT: Sney, David J.
; TITLE OF INVENTION: NUCLEIC ACID ENCODING HUMAN NEURONAL

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; TITLE OF INVENTION: CALCIUM CHANNEL SUBUNITS
; NUMBER OF SEQUENCES: 6
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
; STREET: Two Millitia Drive
; CITY: Lexington
; STATE: MA
; COUNTRY: USA
; ZIP: 02173-4799
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/713,118
; FILING DATE: 16-SEP-1996
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Mata, Elizabeth W.
; REGISTRATION NUMBER: 38,236
; REFERENCE/DOCKET NUMBER: ACC96-01
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-861-6240
; TELEFAX: 617-861-9540
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3298 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 20..3292
; US-08-713-118-3

alignment_scores:
Quality: 5744.00 Length: 1091
Ratio: 5.265 Gaps: 0
Percent Similarity: 100.000 Percent Identity: 99.908

alignment_block:
US-09-397-548-14 x US-08-713-118-3
Align seg 1/1 to: US-08-713-118-3 from: 1 to: 3298

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; Sequence 3, Application US/09452007

; Patent No. 6140485

; GENERAL INFORMATION:

; APPLICANT: Franco, Rodrigo

; APPLICANT: Sun Chen, Ai Ru

; APPLICANT: Suey, David J.

; TITLE OF INVENTION: NUCLEIC ACID ENCODING HUMAN NEURONAL

; TITLE OF INVENTION: CALCIUM CHANNEL SUBUNITS

; NUMBER OF SEQUENCES: 6

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Hamilton, Brook, Smith &amp; Reynolds, P.C.

; STREET: Two Militia Drive

; CITY: Lexington

; STATE: MA

; COUNTRY: USA

; ZIP: 02173-4799

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: Patent in Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/452,007

; FILING DATE:

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US/08/713,118

; FILING DATE: 16-SEP-1996

; ATTORNEY/AGENT INFORMATION:

; NAME: Mata, Elizabeth W.

; REGISTRATION NUMBER: 38,236

; REFERENCE/DOCKET NUMBER: ACC96-01

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 617-861-6240

; TELEFAX: 617-861-9540

; INFORMATION FOR SEQ ID NO: 3:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 3298 base pairs

; TYPE: nucleic acid

; STRANDEDNESS: double

; TOPOLOGY: linear

; MOLECULE TYPE: cDNA

; FEATURE:

; NAME/KEY: CDS

; LOCATION: 20..3292

US-09-452-007-3



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seq\_documentation\_block:  
; Sequence 20, Application US/0845543A  
; Patent No. 5792846  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCuen, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California

COUNTRY: USA  
ZIP: 92101-2926  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FASTSEQ Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/455,543A  
FILING DATE: May 31, 1995  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/223,305  
FILING DATE: April 4, 1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seigman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 20:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 3657 base pairs  
TYPE: nucleic acid  
STRANDEDNESS: double  
TOPOLOGY: linear  
MOLECULE TYPE: Genomic DNA  
HYPOTHETICAL: NO  
ANTI-SENSE: NO  
FRAGMENT TYPE:  
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US-08-455-543A-20

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; Patent No. 5792846
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: Feldman, Daniel
; APPLICANT: Mccue, Ann
; APPLICANT: Brenner, Robert
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND
; NUMBER OF SEQUENCES: 57
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Brown, Martin, Haller & McClain
; STREET: 1660 Union Street
; CITY: San Diego
; STATE: California
; COUNTRY: USA
; ZIP: 92101-2926
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
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; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq Version 1.5
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;; CURRENT APPLICATION DATA:  
;; APPLICATION NUMBER: US/08/455,543A  
;; FILING DATE: May 31, 1995  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 08/223,305  
;; FILING DATE: April 4, 1994  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/868,354  
;; FILING DATE: April 10, 1992  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 07/745,206  
;; FILING DATE: 15-AUG-1991  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 07/620,250  
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;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 07/482,384  
;; FILING DATE: 20-FEB-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 07/603,751  
;; FILING DATE: 04-APR-1989  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: WO PCT/US89/01408  
;; FILING DATE: 04-APR-1989  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 07/176,899  
;; FILING DATE: 04-APR-1988  
;; ATTORNEY/AGENT INFORMATION:  
;; NAME: Seidman, Stephanie L.  
;; REGISTRATION NUMBER: 33,779  
;; REFERENCE/DOCKET NUMBER: 6362-52517  
;; TELECOMMUNICATION INFORMATION:  
;; TELEPHONE: (619)238-0999  
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;; INFORMATION FOR SEQ ID NO: 34:  
;; SEQUENCE CHARACTERISTICS:  
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951 AspAspPheThrAlaSerLeuSerLysGlnSerCysIleThrGluGlnTh 967  
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967 rGlnTyrPhePheAspAsnAspSerLysSerPheSerGlyValLeuAspC 984  
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1067 oSerLeuTTPtYrIleIleGlyIleGlnPheLeuLeuTTPLeuValS 1084  
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3220 CTCCCTGTGTATATCATTTGGAATCCAGTTTCTACTACTTTGGCTGGTAT 3269  
1084 erGlySerThrHisArgLeuLeu 1091  
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3270 CTGGCAGCACACACCGGCTGTTA 3292



GenCore version 4.5  
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OM protein - protein search, using sw model

Run on: June 8, 2001, 19:37:35 ; Search time 63.61 Seconds  
(without alignments)  
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Title: US-09-397-548-15  
Perfect score: 5346  
Sequence: 1 MAAGCLLALTTLTF

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 185757 seqs, 19210857 residues

Total number of hits satisfying chosen parameters: 185757

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Maximum DB seq length: 2000000000
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Post-processing: Minimum Match 0%  
Maximum Match 100%  
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query		Length	DB	ID	Description
		Match	%				
1	5346	100.0	1091	1	US-07-745-206A-25	Sequence 25, Appl	
2	5346	100.0	1091	1	US-08-455-543A-52	Sequence 52, Appl	
3	5346	100.0	1091	2	US-08-223-305C-52	Sequence 52, Appl	
4	5346	100.0	1091	2	US-08-311-363-25	Sequence 25, Appl	
5	5342	99.9	1091	3	US-08-713-118-4	Sequence 4, Appl	
6	5342	99.9	1091	4	US-09-452-007-4	Sequence 4, Appl	
7	5306.5	99.3	1086	1	US-08-455-543A-54	Sequence 54, Appl	
8	5306.5	99.3	1086	2	US-08-223-305C-54	Sequence 54, Appl	
9	5289.5	98.9	1084	1	US-08-455-543A-56	Sequence 56, Appl	
10	5289.5	98.9	1084	2	US-08-223-305C-56	Sequence 56, Appl	
11	5270	98.6	1103	1	US-08-455-543A-53	Sequence 53, Appl	
12	5270	98.6	1103	2	US-08-223-305C-53	Sequence 53, Appl	
13	5250	98.2	1079	1	US-08-455-543A-55	Sequence 55, Appl	
14	5250	98.2	1079	2	US-08-223-305C-55	Sequence 55, Appl	
15	5137.5	96.1	1106	1	US-08-435-675B-5	Sequence 5, Appl	
16	5119.5	95.8	1106	1	US-08-336-257A-8	Sequence 8, Appl	
17	4913	91.9	1086	6	5386025-8	Patent No. 5386025	
18	2581.5	48.3	508	1	US-08-435-675B-6	Sequence 6, Appl	
19	182	3.4	885	3	US-09-074-579-5	Sequence 5, Appl	
20	159.5	3.0	946	3	US-09-074-579-3	Sequence 3, Appl	
21	154	2.9	903	1	US-08-021-601-12	Sequence 12, Appl	
22	154	2.9	903	1	US-08-082-849B-12	Sequence 12, Appl	
23	154	2.9	903	5	PCR-US94-01634-12	Sequence 12, Appl	
24	152.5	2.9	789	1	US-08-471-033-32	Sequence 32, Appl	
25	152.5	2.9	789	2	US-08-471-044-32	Sequence 32, Appl	
26	152.5	2.9	789	2	US-08-463-483A-32	Sequence 32, Appl	
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29	132.5	2.9	789	2	US-08-838-219B-4	Sequence 4, Appl
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32	132.5	2.9	789	3	US-09-233-336A-4	Sequence 4, Appl
33	132.5	2.9	789	4	US-09-233-752A-4	Sequence 4, Appl
34	150.5	2.8	789	4	US-08-960-780-6	Sequence 6, Appl
35	148.5	2.8	790	4	US-08-960-780-4	Sequence 4, Appl
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37	147.5	2.8	746	3	US-09-233-336A-6	Sequence 6, Appl
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39	145.5	2.7	790	4	US-08-960-780-8	Sequence 8, Appl
40	141.5	2.6	789	1	US-08-471-033-39	Sequence 29, Appl
41	141.5	2.6	789	2	US-08-471-044-29	Sequence 29, Appl
42	141.5	2.6	789	2	US-08-463-483A-29	Sequence 29, Appl
43	141.5	2.6	789	2	US-08-471-046A-29	Sequence 29, Appl
44	141.5	2.6	789	2	US-08-470-566B-29	Sequence 29, Appl
45	141.5	2.6	789	2	US-08-838-219B-2	Sequence 2, Appl

## ALIGNMENTS

```

RESULT      1
US-07-745-206A-25
; Sequence 25, Application US/07745206A
; Patent No. 5429921
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: McCue, Ann
; APPLICANT: Feldman, Daniel
; TITLE OF INVENTION: Human Calcium Channel Compositions and
; TITLE OF INVENTION: Methods
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fitch, Even, Tabin & Flannery
; STREET: 135 S. Lasalle
; CITY: Chicago
; STATE: Illinois
; COUNTRY: U.S.A.
; ZIP: 60603
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC Compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07745,206A
; FILING DATE: 19910815
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Feder, Scott B
; REFERENCE/DOCKET NUMBER: 51504
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312-372-7842
; INFORMATION FOR SEQ ID NO: 25:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1091 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; IS-07-745-206A-25

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Query Match 100.0%; Score 5346; DB 1; Length 1091;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1018: Conservative 0; Mismatches 0; Indels 0;
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Db 61 YEKYQDLYTVEPNNAQVLAARDAIEKLLSNRSKALVSLAEAEKVQAAHQRDFASN 120  
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RESULT 2

US-08-455-543A-52  
; Sequence 52, Application 05/0845543A  
; Patent No. 5792846  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven

APPLICANT: Williams, Mark  
APPLICANT: Feldman, Daniel  
APPLICANT: McCue, Ann  
APPLICANT: Brenner, Robert  
TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
TITLE OF INVENTION: METHODS  
NUMBER OF SEQUENCES: 57  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Brown, Martin, Haller & McClain  
STREET: 1660 Union Street  
CITY: San Diego  
STATE: California  
COUNTRY: USA  
ZIP: 92101-2926  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/455,543A  
FILING DATE: May 31, 1995  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/223,305  
FILING DATE: April 4, 1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 6362-52517  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 52:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1091 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
US-08-455-543A-52

Query Match 100.0%; Score 5346; DB 1; Length 1091;  
Best Local Similarity 100.0%; Pred. No. 0;  
Matches 1018; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 481 NOLILGVMDVSLDIEKRLTFRFLCPNGYFADPNQYVLLHLPNLPKPKSOEPVTL 540  
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Db 541 DFLDALENDIKVEIRNKMIDGESGEKTRTLVKQSDERYIDKGNRTYTWTVPNGTDYSL 600  
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Db 601 ALVLPYISYIYAKLEETITQARSKKGMKQSETLKPDNFESGYTFTAPRDYCNLDKI 660  
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Db 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSWIEFTKTSIRDPGAGVCDCKRNSDVMDCVI 840  
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Db 841 LDGQFLLMANHDDYTNOIGRFEGEIDPSLMRHLNINISYAFNKSVDYOSVCEPGAAPKQ 900  
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Db 901 GAGHSAYVPSVADILQIGWATAAASWILQOFLLSLTPRLLLEAVEMEDDDFTASLSKQ 960  
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Db 961 SCITQOTQFFNDKSGFVLDGNCNCSIFRFGKLMNTNLFIMVYESKGTCPDTRL 1018

## RESULT 3

US-08-223-305C-52

; Sequence 52, Application US/08223305C

; Patent No. 5851824

; GENERAL INFORMATION:

; APPLICANT: Harpold, Michael

; APPLICANT: Ellis, Steven

; APPLICANT: Williams, Mark

; APPLICANT: Feldman, Daniel

APPLICANT: McCue, Ann  
APPLICANT: Brenner, Robert  
TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
TITLE OF INVENTION: METHODS  
NUMBER OF SEQUENCES: 57  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Brown, Martin, Haller & McClain  
CITY: San Diego  
STATE: California  
COUNTRY: USA  
ZIP: 92101-2926  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/223,305C  
FILING DATE: April 4, 1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 52516 (P519739)  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 52:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1091 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
US-08-223-305C-52

Query Match 100.0%; Score 5346; DB 2; Length 1091;  
Best Local Similarity 100.0%; Pred. No. 0;  
Matches 1018; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MAAGCLLALTLLFQSLIGPSSEEPFSAVTIKSVVDKMQEDLVTLAKTASGVNQLVDI 60  
Db 1 MAAGCLLALTLLFQSLIGPSSEEPFSAVTIKSVVDKMQEDLVTLAKTASGVNQLVDI 60  
QY 61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120  
Db 61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120  
QY 121 EYVYNAKDDLPDPEKNDSEPGSRKPKVFIEDANRGQISYQRAAVHIPTDIYEGSTIVL 180

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Db 121 EVVYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRIQISYQHAHVHIPTDIYEGSTIVL 180
Qy 181 NELNWTLSALDEVEFKKNEEDPSLLQVFGSATGLARYYPASPPWVDNSRTNPKNIDLDYVRR 240
Db 181 NELNWTLSALDEVEFKKNEEDPSLLQVFGSATGLARYYPASPPWVDNSRTNPKNIDLDYVRR 240
Qy 241 RPWYIOGAASPKDMLILVDVSGVSGTTLKIRTSVSEMLETSSDDDFVNVASFNSNAQD 300
Db 241 RPWYIOGAASPKDMLILVDVSGVSGTTLKIRTSVSEMLETSSDDDFVNVASFNSNAQD 300
Qy 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGTDYKKGFSFAFEQLLNINVRANCNKIIML 360
Db 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGTDYKKGFSFAFEQLLNINVRANCNKIIML 360
Qy 361 FTGGEERAQEIFNKYNKDKKRVFRFVSQGHNYERGIQWACENKGYEIPSGAIR 420
Db 361 FTGGEERAQEIFNKYNKDKKRVFRFVSQGHNYERGIQWACENKGYEIPSGAIR 420
Qy 421 INTQEYLDVLGRPMVLGADKAKOVQWNTNVLDALEGLVITGLPVFNITGQENKTNLK 480
Db 421 INTQEYLDVLGRPMVLGADKAKOVQWNTNVLDALEGLVITGLPVFNITGQENKTNLK 480
Qy 481 NQLILGVMGVDVSLDIEIKRLTPFTLCPCNGYYPFAIDPNGVLLHPNLPKNPKSQBPVTL 540
Db 481 NQLILGVMGVDVSLDIEIKRLTPFTLCPCNGYYPFAIDPNGVLLHPNLPKNPKSQBPVTL 540
Qy 541 DFLDAELNDIKVEIRNKMIDGSGEFTFLYKSDERYIDKGNRTYTWTPVNGTDYSL 600
Db 541 DFLDAELNDIKVEIRNKMIDGSGEFTFLYKSDERYIDKGNRTYTWTPVNGTDYSL 600
Qy 601 ALVLPYTFYIIKAKLEETITQARSKGKMKDSETLKPDNFEESGYTFIAPRDYCNLDKI 660
Db 601 ALVLPYTFYIIKAKLEETITQARSKGKMKDSETLKPDNFEESGYTFIAPRDYCNLDKI 660
Qy 661 SDNTEFLNFEFIDKRTNPNNSCNADLNIRVLLDAGFTNELVQWNSKQKNIKGVKAR 720
Db 661 SDNTEFLNFEFIDKRTNPNNSCNADLNIRVLLDAGFTNELVQWNSKQKNIKGVKAR 720
Qy 721 FVYTDGGITRVYKPEAGENWOENPETEYDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
Db 721 FVYTDGGITRVYKPEAGENWOENPETEYDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
Qy 781 MVSKAVEIYIQGLLPAVVGIIKIDVNSWENFTKSIROPACAGPCVDCRNSDVMDCVI 840
Db 781 MVSKAVEIYIQGLLPAVVGIIKIDVNSWENFTKSIROPACAGPCVDCRNSDVMDCVI 840
Qy 841 LDDGGFLMANHDDYTNOIGRFGEIDPSLMRHLVNI SVYAFNKSVDYQSVCEPGAAPKQ 900
Db 841 LDDGGFLMANHDDYTNOIGRFGEIDPSLMRHLVNI SVYAFNKSVDYQSVCEPGAAPKQ 900
Qy 901 GAGHRSAYVPSVADILQIGWATAAAMSILQOFLLSLTFPRLLAEVEMEDDDFTASLSKQ 960
Db 901 GAGHRSAYVPSVADILQIGWATAAAMSILQOFLLSLTFPRLLAEVEMEDDDFTASLSKQ 960
Qy 961 SCITEQYIFFDNDKSFSGVLDCGNCSTRIFHGEKLMNTNLIETWESKGTCPDTRL 1018
Db 961 SCITEQYIFFDNDKSFSGVLDCGNCSTRIFHGEKLMNTNLIETWESKGTCPDTRL 1018
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## RESULT 4

```
US-08-311-363-25
; Sequence 25, Application US/08311363
; Patent No. 5876958
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: Feldman, Daniel
; APPLICANT: McCue, Ann
; APPLICANT: Brenner, Robert
; TITLE OF INVENTION: Human Calcium Channel Compositions and
; METHODS OF INVENTION: Methods
; NUMBER OF SEQUENCES: 32
```

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; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Brown, Martin, Haller & McClain
; STREET: 1660 Union Street
; CITY: San Diego
; STATE: California
; COUNTRY: USA
; ZIP: 92101-2926
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/311,363
; FILING DATE:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/745,206
; FILING DATE: 15-AUG-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Seidman, Stephanie L.
; REGISTRATION NUMBER: 33,779
; REFERENCE/DOCKET NUMBER: 6362-51506
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619)238-0062
; TELEFAX: (619)238-0062
; INFORMATION FOR SEQ ID NO: 25:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1091 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-311-363-25
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Query Match 100.0%; Score 5346; DB 2; Length 1091;

Best Local Similarity 100.0%; Pred. No. 0; Indels 0; Gaps 0;

Matches 1018; Conservative 0; Mismatches 0;

Qy 1 MAAGCLLALTTLTQSLIGPSEEPFPPSAVTIKSWYDKMKQEDLVTLAKTASGVNQLVDI 60

Db 1 MAAGCLLALTTLTQSLIGPSEEPFPPSAVTIKSWYDKMKQEDLVTLAKTASGVNQLVDI 60

Qy 61 YEKYQDLTYVEPNNAQQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAAHQWREFASN 120

Db 61 YEKYQDLTYVEPNNAQQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAAHQWREFASN 120

Qy 121 EVVYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRIQISYQHAHVHIPTDIYEGSTIVL 180

Db 121 EVVYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRIQISYQHAHVHIPTDIYEGSTIVL 180

Qy 181 NELNWTLSALDEVEFKKNEEDPSLLQVFGSATGLARYYPASPPWVDNSRTNPKNIDLDYVRR 240

Db 181 NELNWTLSALDEVEFKKNEEDPSLLQVFGSATGLARYYPASPPWVDNSRTNPKNIDLDYVRR 240

Qy 241 RPWYIOGAASPKDMLILVDVSGVSGTTLKIRTSVSEMLETSSDDDFVNVASFNSNAQD 300

Db 241 RPWYIOGAASPKDMLILVDVSGVSGTTLKIRTSVSEMLETSSDDDFVNVASFNSNAQD 300

Qy 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGTDYKKGFSFAFEQLLNINVRANCNKIIML 360

Db 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGTDYKKGFSFAFEQLLNINVRANCNKIIML 360

Qy 361 FTGGEERAQEIFNKYNKDKKRVFRFVSQGHNYERGIQWACENKGYEIPSGAIR 420

Db 361 FTGGEERAQEIFNKYNKDKKRVFRFVSQGHNYERGIQWACENKGYEIPSGAIR 420

Qy 421 INTQEYLDVLGRPMVLGADKAKOVQWNTNVLDALEGLVITGLPVFNITGQENKTNLK 480

Db 421 INTQEYLDVLGRPMVLGADKAKOVQWNTNVLDALEGLVITGLPVFNITGQENKTNLK 480

Qy 481 NQLILGVMGVDVSLDIEIKRLTPFTLCPCNGYYPFAIDPNGVLLHPNLPKNPKSQBPVTL 540

Db 481 NQLILGVMGVDVSLDIEIKRLTPFTLCPCNGYYPFAIDPNGVLLHPNLPKNPKSQBPVTL 540

QY 541 DFLDALENDIKVEIRNKMIDGESGKTRFTLVKSODERYIDKGNRTYTWTPVNGTDYSL 600  
DB 541 DFLDALENDIKVEIRNKMIDGESGKTRFTLVKSODERYIDKGNRTYTWTPVNGTDYSL 600  
QY 601 ALVLPYSEYIYKALEETITQARSKKGMKDSKSETLKPONFEESGYTFTAPRDYCNLDKI 660  
DB 601 ALVLPYSEYIYKALEETITQARSKKGMKDSKSETLKPONFEESGYTFTAPRDYCNLDKI 660  
QY 661 SONNTEFLNNEFIDRKTNNPNSCNADLINRVLLDAGFTNQLVQYWSKQKNIKGVKAR 720  
DB 661 SONNTEFLNNEFIDRKTNNPNSCNADLINRVLLDAGFTNQLVQYWSKQKNIKGVKAR 720  
QY 721 FVVDGGITRVYPKEAGENQENPETEYDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
DB 721 FVVDGGITRVYPKEAGENQENPETEYDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
QY 781 MYSKAVEIYIQGLKLPKPAVVGKIDVNSWNIENFTKTSIRDPCAGPVCDCRNSDVMDCVI 840  
DB 781 MYSKAVEIYIQGLKLPKPAVVGKIDVNSWNIENFTKTSIRDPCAGPVCDCRNSDVMDCVI 840  
QY 841 LDGGFLLMANHDDYTNOIGRFFGEIDPSLMRHLVNI SYAFNKSVDYOSVCEPGAAPKQ 900  
DB 841 LDGGFLLMANHDDYTNOIGRFFGEIDPSLMRHLVNI SYAFNKSVDYOSVCEPGAAPKQ 900  
QY 901 GAGHSAYVPSVADILQIGWATAAASWILQOFLSLTTPRLLLEAVEMEDDDFTASLSKQ 960  
DB 901 GAGHSAYVPSVADILQIGWATAAASWILQOFLSLTTPRLLLEAVEMEDDDFTASLSKQ 960  
QY 961 SCITEQTQYFFDNDSKSFSGVLDGNCNCRIFHGEKLMNTNLFIMVESKGTCPDTRL 1018  
DB 961 SCITEQTQYFFDNDSKSFSGVLDGNCNCRIFHGEKLMNTNLFIMVESKGTCPDTRL 1018

## RESULT 5

US-08-713-118-4  
; Sequence 4, Application US/08713118  
; Patent No. 6040436  
; GENERAL INFORMATION:  
; APPLICANT: Franco, Rodrigo  
; APPLICANT: Sun Chen, Ai Ru  
; APPLICANT: Suey, David J.  
; TITLE OF INVENTION: NUCLEIC ACID ENCODING HUMAN NEURONAL  
; TITLE OF INVENTION: CALCIUM CHANNEL SUBUNITS  
; NUMBER OF SEQUENCES: 6  
; CORRESPONDENCE ADDRESS:  
; ADDRESS: Hamilton, Brook, Smith & Reynolds, P.C.  
; CITY: Lexington  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 02173-4799  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/713,118  
; FILING DATE: 16-SEP-1996  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Mata, Elizabeth W.  
; REGISTRATION NUMBER: 38,236  
; REFERENCE/DOCKET NUMBER: ACC96-01  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 617-861-6240  
; TELEFAX: 617-861-9540  
; INFORMATION FOR SEQ ID NO: 4:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1091 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear

; MOLECULE TYPE: protein  
US-08-713-118-4

Query Match 99.9%; Score 5342; DB 3; Length 1091;  
Best Local Similarity 99.9%; Pred. No. 0;  
Matches 1017; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MAAGCLLALTLTFLQSLLIGPSSSEPPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60  
DB 1 MAAGCLLALTLTFLQSLLIGPSSSEPPSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60  
QY 61 YEKYQDLYIVENNAQOLVEIAARDIEKLLSNRSLKALVSLALEAEKVAQAAHQWREFASN 120  
DB 61 YEKYQDLYIVENNAQOLVEIAARDIEKLLSNRSLKALVSLALEAEKVAQAAHQWREFASN 120  
QY 121 EYVYNAKDDLPEDKNDSEPGSORIKPVIEDANFQRIQSYQHAHVHIPTDIYEGSTIVL 180  
DB 121 EYVYNAKDDLPEDKNDSEPGSORIKPVIEDANFQRIQSYQHAHVHIPTDIYEGSTIVL 180  
QY 181 NELNMTSALDEVFKKNREEDPSLLMQVFGSATGLARYYPASPMVDNSRTPNKIDLYDVR 240  
DB 181 NELNMTSALDEVFKKNREEDPSLLMQVFGSATGLARYYPASPMVDNSRTPNKIDLYDVR 240  
QY 241 RPYITQGAASPKDMLILVDYSGVSGTLTKLRTSYSEMLETLSDDDFNVASFNSNAQD 300  
DB 241 RPYITQGAASPKDMLILVDYSGVSGTLTKLRTSYSEMLETLSDDDFNVASFNSNAQD 300  
QY 301 VSCFOHLVQANVRNKKVLKADAVNNITAKGIDYKKGFSFAFEOLLNLYNSRANCNKIIML 360  
DB 301 VSCFOHLVQANVRNKKVLKADAVNNITAKGIDYKKGFSFAFEOLLNLYNSRANCNKIIML 360  
QY 361 FTDGGEERAQEIFNKYNDKKVVRVFRFSYQGHNYERGPQIWMACENKGYIYEIPSGAIR 420  
DB 361 FTDGGEERAQEIFNKYNDKKVVRVFRFSYQGHNYERGPQIWMACENKGYIYEIPSGAIR 420  
QY 421 INTOEYLDVLRPMVLGAKAKOVOMTNYLDALGLVITGTLPVFNITGQFENKTNLK 480  
DB 421 INTOEYLDVLRPMVLGAKAKOVOMTNYLDALGLVITGTLPVFNITGQFENKTNLK 480  
QY 481 NQILGVMGVDVSLIEDIKRLTFRFTLCPNGYFAIDPNGVYLLHPLNLPKNKSPQPVTL 540  
DB 481 NQILGVMGVDVSLIEDIKRLTFRFTLCPNGYFAIDPNGVYLLHPLNLPKNKSPQPVTL 540  
QY 541 DFLDALENDIKVEIRNKMIDGESGKTRFTLVKSODERYIDKGNRTYTWTPVNGTDYSL 600  
DB 541 DFLDALENDIKVEIRNKMIDGESGKTRFTLVKSODERYIDKGNRTYTWTPVNGTDYSL 600  
QY 601 ALVLPYSEYIYKALEETITQARSKKGMKDSKSETLKPONFEESGYTFTAPRDYCNLDKI 660  
DB 601 ALVLPYSEYIYKALEETITQARSKKGMKDSKSETLKPONFEESGYTFTAPRDYCNLDKI 660  
QY 661 SONNTEFLNNEFIDRKTNNPNSCNADLINRVLLDAGFTNQLVQYWSKQKNIKGVKAR 720  
DB 661 SONNTEFLNNEFIDRKTNNPNSCNADLINRVLLDAGFTNQLVQYWSKQKNIKGVKAR 720  
QY 721 FVVDGGITRVYPKEAGENQENPETEYDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
DB 721 FVVDGGITRVYPKEAGENQENPETEYDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
QY 781 MYSKAVEIYIQGLKLPKPAVVGKIDVNSWNIENFTKTSIRDPCAGPVCDCRNSDVMDCVI 840  
DB 781 MYSKAVEIYIQGLKLPKPAVVGKIDVNSWNIENFTKTSIRDPCAGPVCDCRNSDVMDCVI 840  
QY 841 LDGGFLLMANHDDYTNOIGRFFGEIDPSLMRHLVNI SYAFNKSVDYOSVCEPGAAPKQ 900  
DB 841 LDGGFLLMANHDDYTNOIGRFFGEIDPSLMRHLVNI SYAFNKSVDYOSVCEPGAAPKQ 900  
QY 901 GAGHSAYVPSVADILQIGWATAAASWILQOFLSLTTPRLLLEAVEMEDDDFTASLSKQ 960  
DB 901 GAGHSAYVPSVADILQIGWATAAASWILQOFLSLTTPRLLLEAVEMEDDDFTASLSKQ 960  
QY 961 SCITEQTQYFFDNDSKSFSGVLDGNCNCRIFHGEKLMNTNLFIMVESKGTCPDTRL 1018

Db 961 SCITEQTYFFDNDKSGVLDGNCNCSIFHGEKLMNTNLFIMVESKGTCPDTRL 1018

RESULT 6

US-09-452-007-4  
; Sequence 4, Application US/09452007  
; Patent No. 6140485  
; GENERAL INFORMATION:  
; APPLICANT: Franco, Rodrigo  
; APPLICANT: Sun Chen, Ai Ru  
; APPLICANT: Suey, David J.  
; TITLE OF INVENTION: NUCLEIC ACID ENCODING HUMAN NEURONAL  
; TITLE OF INVENTION: CALCIUM CHANNEL SUBUNITS  
; NUMBER OF SEQUENCES: 6  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.  
; STREET: Two Militia Drive  
; CITY: Lexington  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 02173-4799  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/452,007  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/08/713,118  
; FILING DATE: 16-SEP-1996  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Mata, Elizabeth W.  
; REGISTRATION NUMBER: 38,236  
; REFERENCE/DOCKET NUMBER: ACC96-01  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 617-861-6240  
; TELEFAX: 617-861-9540  
; INFORMATION FOR SEQ ID NO: 4:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1091 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-09-452-007-4

Query Match 99.9%; Score 5342; DB 4; Length 1091;  
Best Local Similarity 99.9%; Pred. No. 0;  
Matches 1017; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MAAGCLLALTLFOSLLIGPSSSEPPFSAVTKSWDKMQEDVTLAKTASGVNQLVDI 60  
Db 1 MAAGCLLALTLFOSLLIGPSSSEPPFSAVTKSWDKMQEDVTLAKTASGVNQLVDI 60  
QY 61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSLVSLALEAEKVQAAHQWREDFASN 120  
Db 61 YEKYQDLYTVEPNNARQLVEIAARDIEKLLSNRSLVSLALEAEKVQAAHQWREDFASN 120  
QY 121 EYVYNNAKDDLPENKNDSPGSRQKVPFIEDANFGRIQSYQHAHVHPTDIYEGSTIVL 180  
Db 121 EYVYNNAKDDLPENKNDSPGSRQKVPFIEDANFGRIQSYQHAHVHPTDIYEGSTIVL 180  
QY 181 NELNWTSAIDVEFKKNREDDPSLLQWFGSATGLARYYPASPWVNSRTPNKIDLYDVR 240  
Db 181 NELNWTSAIDVEFKKNREDDPSLLQWFGSATGLARYYPASPWVNSRTPNKIDLYDVR 240  
QY 241 RPWYIOGAASPKDMLTLVDVSGVSLTKLIRTSYSEMLETSLDDDFNVASFNSNAQD 300  
Db 241 RPWYIOGAASPKDMLTLVDVSGVSLTKLIRTSYSEMLETSLDDDFNVASFNSNAQD 300

QY 301 VSCFOHLYQVANNRKKVLKDAVNNTAKGITYKKGFSAFQOLLNLYNVRANCKNIIML 360  
Db 301 VSCFOHLYQVANNRKKVLKDAVNNTAKGITYKKGFSAFQOLLNLYNVRANCKNIIML 360  
QY 361 FTDGGEERAQEIFNKYNDKKVVRFRFVSQGHYERGPQIWMACENKGYIYIPISGATR 420  
Db 361 FTDGGEERAQEIFNKYNDKKVVRFRFVSQGHYERGPQIWMACENKGYIYIPISGATR 420  
QY 421 INTQEVLDVGLRPMVLADGKAKQOVWNTYLDALGLVITGLTPVFNITGOFENKTNLK 480  
Db 421 INTQEVLDVGLRPMVLADGKAKQOVWNTYLDALGLVITGLTPVFNITGOFENKTNLK 480  
QY 481 NQLILGVMGVDVSLIEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPLNQLPKNKSQEPVTL 540  
Db 481 NQLILGVMGVDVSLIEDIKRLTPRFTLCPNGYYFAIDPNGYVLLHPLNQLPKNKSQEPVTL 540  
QY 541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTVPNGTDYSL 600  
Db 541 DFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYIDKGNRTYTWTVPNGTDYSL 600  
QY 601 ALVLPITYFYIYKAKLEETITQARSKKGMKDSITLKPDPNFESGYTFIAPDYCNLDKI 660  
Db 601 ALVLPITYFYIYKAKLEETITQARSKKGMKDSITLKPDPNFESGYTFIAPDYCNLDKI 660  
QY 661 SDNTEFLLNFNEFIDRKTTPNPNPCNADLNIRVLLDAGFTNELVQVNSKQNIKGVKAR 720  
Db 661 SDNTEFLLNFNEFIDRKTTPNPNPCNADLNIRVLLDAGFTNELVQVNSKQNIKGVKAR 720  
QY 721 FVYTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPAYESGI 780  
Db 721 FVYTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPAYESGI 780  
QY 781 MYSKAVEIYIQGLLKPAVVGKIDVNSHNIENFTKTSIRDPGAGVPCDCRKRSDVMDCVI 840  
Db 781 MYSKAVEIYIQGLLKPAVVGKIDVNSHNIENFTKTSIRDPGAGVPCDCRKRSDVMDCVI 840  
QY 841 LDDGGFLMANHDDYTNOIGREFGEIDPSLMRHLNIVSVYAFNKSVDYOSVCEPGAAPKQ 900  
Db 841 LDDGGFLMANHDDYTNOIGREFGEIDPSLMRHLNIVSVYAFNKSVDYOSVCEPGAAPKQ 900  
QY 901 GAGHSAYVPSVADILQIGWATAAASILQOFLSLTTPRLLLEAVEMEDDFTASLSKQ 960  
Db 901 GAGHSAYVPSVADILQIGWATAAASILQOFLSLTTPRLLLEAVEMEDDFTASLSKQ 960  
QY 961 SCITEQTYFFDNDKSGVLDGNCNCSIFHGEKLMNTNLFIMVESKGTCPDTRL 1018  
Db 961 SCITEQTYFFDNDKSGVLDGNCNCSIFHGEKLMNTNLFIMVESKGTCPDTRL 1018

RESULT 7  
US-08-455-543A-54  
; Sequence 54, Application US/08455543A  
; Patent No. 5792846  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette

COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/455,543A  
FILING DATE: May 31, 1995  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/223,305  
FILING DATE: April 4, 1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 6362-52517  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 54:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1086 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
US-08-455-543A-54

Query Match 99.3%; Score 5306.5; DB 1; Length 1086;

Best Local Similarity 99.5%; Pred. No. 0;

Matches 1013; Conservative 0; Mismatches 0; Indels 5; Gaps 1;

QY 1 MAAGCLLATLTLFQSLLLGSPSEPPFPSPAVIKSWDKMQEDLVLTAKTASGVNQLVDI 50  
DB 1 MAAGCLLATLTLFQSLLLGSPSEPPFPSPAVIKSWDKMQEDLVLTAKTASGVNQLVDI 60  
QY 61 YEKYQDLYTVENPNNARQYVEIARDEKLLSNRSLVALSLAEKVAQAAHWRDFASN 120  
DB 61 YEKYQDLYTVENPNNARQYVEIARDEKLLSNRSLVALSLAEKVAQAAHWRDFASN 120  
QY 121 EVVYNAKDDLDPEKNDSPGSRQIKPVIEDANFGRQISYQHAHVHIPTDIYEGSTIVL 180  
DB 121 EVVYNAKDDLDPEKNDSPGSRQIKPVIEDANFGRQISYQHAHVHIPTDIYEGSTIVL 180  
QY 181 NEIWTLSALDEVKKNREDDPILLQVFCSATGLARYYPASFWVDSNRPKNIDLYDVR 240  
DB 181 NEIWTLSALDEVKKNREDDPILLQVFCSATGLARYYPASFWVDSNRPKNIDLYDVR 240  
QY 241 RPWYIQAASPKDMLILVDVSGVSLTLLKRTSVSEMLETILSDDDFNVASFSNSNAOD 300  
DB 241 RPWYIQAASPKDMLILVDVSGVSLTLLKRTSVSEMLETILSDDDFNVASFSNSNAOD 300  
QY 301 VSCFOHLVQANVRNKKVLDKAVNNITAKGIDYKKGFSAFEQLLNNVSRANCNKIIML 360

DB 301 VSCFOHLVQANVRNKKVLDKAVNNITAKGIDYKKGFSAFEQLLNNVSRANCNKIIML 360  
QY 361 FTDGGEERAQELFNKYNKDKKVRVFRFSVQGHYERGPQIWMACENKGYEYIPIPSIGAIR 420  
DB 361 FTDGGEERAQELFNKYNKDKKVRVFRFSVQGHYERGPQIWMACENKGYEYIPIPSIGAIR 420  
QY 421 INTOEYLDVLRPMVLGAKAKOVQWNTNYLDALGLVITGLPVFNITGQENKTNLK 480  
DB 421 INTOEYLDVLRPMVLGAKAKOVQWNTNYLDALGLVITGLPVFNITGQENKTNLK 480  
QY 481 NQILIGVMGVDSLEDIKRLTPRFTLCPNGYFAIDPNGYVLLHPLNLPKSPQBPVTL 540  
DB 481 NQILIGVMGVDSLEDIKRLTPRFTLCPNGYFAIDPNGYVLLHPLNLPKSPQBPVTL 540  
QY 541 DFLDAELNDIKVEIRNKMIDGESGKTFRTLVKSQDERYIDKGNRTYTWTPVNGTIDYSL 600  
DB 541 DFLDAELNDIKVEIRNKMIDGESGKTFRTLVKSQDERYIDKGNRTYTWTPVNGTIDYSL 600  
QY 601 ALVLPYTFYIYKAKLEETITQARSKKGMKDSITLKPONFESGYTFTIAPRYCNDLKI 660  
DB 601 ALVLPYTFYIYKAKLEETITQARSKKGMKDSITLKPONFESGYTFTIAPRYCNDLKI 660  
QY 661 SDNTEFLNLFNEFIDRKTNNPNSCNADLINRVLLDAGFTNELVQYWSKQKNIKGYKAR 720  
DB 661 SDNTEFLNLFNEFIDRKTNNPNSCNADLINRVLLDAGFTNELVQYWSKQKNIKGYKAR 720  
QY 721 FVYTDGGITRVYPKEAGENQENPETEYDFYKRSLDNDNVFTAPYFNKSGPGAYESGI 780  
DB 721 FVYTDGGITRVYPKEAGENQENPETEYDFYKRSLDNDNVFTAPYFNKSGPGAYESGI 780  
QY 781 MYSKAVEIYIQGKLLKPAVVGKIDVNSWIENFTKTSIRDPCAGPVCDCCKRNSDVMDCVI 840  
DB 781 MYSKAVEIYIQGKLLKPAVVGKIDVNSWIENFTKTSIRDPCAGPVCDCCKRNSDVMDCVI 840  
QY 841 LDDGGFLMANHDDYTNQIGRFFGEIDPSLMRHLVNI SVAFNKSIDYQSVCEPGAAPKQ 900  
DB 841 LDDGGFLMANHDDYTNQIGRFFGEIDPSLMRHLVNI SVAFNKSIDYQSVCEPGAAPKQ 900  
QY 901 GAGHSAYVPSVADILQIGWATAAASWILQOFLLSITPRLLAEVEMEDDDDTASLSKQ 960  
DB 901 GAGHSAYVPSVADILQIGWATAAASWILQOFLLSITPRLLAEVEMEDDDDTASLSKQ 960  
QY 961 SCITEQTYFFDNDKSFSGVLDGCGNCSRIHFGEKLMNTNLIIFIMVESKGTCPCDTRL 1018  
DB 961 SCITEQTYFFDNDKSFSGVLDGCGNCSRIHFGEKLMNTNLIIFIMVESKGTCPCDTRL 1018

RESULT 8

US-08-223-305C-54

Sequence 54, Application US/08223305C

Patent No 5851824

GENERAL INFORMATION:

APPLICANT: Harpold, Michael

APPLICANT: Ellis, Steven

APPLICANT: Williams, Mark

APPLICANT: Feldman, Daniel

APPLICANT: McCue, Ann

APPLICANT: Brenner, Robert

TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND

METHODS

NUMBER OF SEQUENCES: 57

CORRESPONDENCE ADDRESS:

ADDRESSEE: Brown, Martin, Haller &amp; McClain

STREET: 1660 Union Street

CITY: San Diego

STATE: California

COUNTRY: USA

ZIP: 92101-2926

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette

COMPUTER: IBM Compatible

OPERATING SYSTEM: DOS



```

1 SOFTWARE: FastSeq Version' 1.5
2 CURRENT APPLICATION DATA:
3 APPLICATION NUMBER: US/08/223,305C
4 FILING DATE: April 4, 1994
5 PRIOR APPLICATION DATA:
6 APPLICATION NUMBER: 07/868,354
7 FILING DATE: April 10, 1992
8 PRIOR APPLICATION DATA:
9 APPLICATION NUMBER: US 07/745,206
10 FILING DATE: 15-AUG-1991
11 PRIOR APPLICATION DATA:
12 APPLICATION NUMBER: US 07/620,250
13 FILING DATE: 30-NOV-1990
14 PRIOR APPLICATION DATA:
15 APPLICATION NUMBER: US 07/482,384
16 FILING DATE: 20-FEB-1990
17 PRIOR APPLICATION DATA:
18 APPLICATION NUMBER: US 07/603,751
19 FILING DATE: 04-APR-1989
20 PRIOR APPLICATION DATA:
21 APPLICATION NUMBER: WO PCT/US89/01408
22 FILING DATE: 04-APR-1989
23 PRIOR APPLICATION DATA:
24 APPLICATION NUMBER: US 07/176,899
25 FILING DATE: 04-APR-1988
26 ATTORNEY/AGENT INFORMATION:
27 NAME: Seidman, Stephanie L.
28 REGISTRATION NUMBER: 33,779
29 REFERENCE/DOCCT NUMBER: 52516 (P519)
30 TELECOMMUNICATION INFORMATION:
31 TELEPHONE: (619)238-0999
32 TELEFAX: (619)238-0062
33 INFORMATION FOR SEQ ID NO: 54:
34 SEQUENCE CHARACTERISTICS:
35 LENGTH: 1086 amino acids
36 TYPE: amino acid
37 STRANDEDNESS: single
38 TOPOLOGY: linear
39 MOLECULE TYPE: protein
40 FRAGMENT TYPE: Internal
41 US-08-223-305C-54

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Query Match	99.3%;	Score	5306.5;	DB	2;	Length	1086;
Best Local Similarity	99.5%;	Pred. No.	0;				
Matches 1013;	Conservative	0;	Mismatches	0;	Indels	5;	Gaps
QY	1	MAAGCLLALTLTTLFOSILLIGPSSSEPPPSAVTTIKSWDKMKQEDLVLTAKTASGVNQLVDI	60				
Db	1	MAAGCLLALTLTTLFOSILLIGPSSSEPPPSAVTTIKSWDKMKQEDLVLTAKTASGVNQLVDI	60				
QY	61	YERYQDLYTVEPNNAQQLVEIAARDTEKLISNRSKALVSLALAEAKVQAAHQWREDFASN	120				
Db	61	YERYQDLYTVEPNNAQQLVEIAARDTEKLISNRSKALVSLALAEAKVQAAHQWREDFASN	120				
QY	121	EVVYNAKODLDPEKNDSEPGSORIKPVFIEDANFGQISYQHAAVHIPTDIYEGSTIVL	180				
Db	121	EVVYNAKODLDPEKNDSEPGSORIKPVFIEDANFGQISYQHAAVHIPTDIYEGSTIVL	180				
QY	181	NELNWTLSALDEVEFKKNEEDPSLLWQVFGSATGLARYYPASPVDWNSRTPNKIDLYDVR	240				
Db	181	NELNWTLSALDEVEFKKNEEDPSLLWQVFGSATGLARYYPASPVDWNSRTPNKIDLYDVR	240				
QY	241	RPWYIOGAASPKDMLLTVDSGVSGLTKLIRTSVSEMLETISDDDFVNVASFNSNAQD	300				
Db	241	RPWYIOGAASPKDMLLTVDSGVSGLTKLIRTSVSEMLETISDDDFVNVASFNSNAQD	300				
QY	301	VSCFOHLVQANVRNKKVLDAVNNITAKGTDYKKGFSFAFQOLLNYNVSRANCKIIML	360				
Db	301	VSCFOHLVQANVRNKKVLDAVNNITAKGTDYKKGFSFAFQOLLNYNVSRANCKIIML	360				
QY	361	FTDGGERAQEIFKNYKNOKKVRFRFSYGOHNIYERGP:IQWACENKGYIYIPISGAIR	420				

361	Db	FTDGEERAQBIFNKYNKDKVRVFRFSVGQHNYERGP IQWMAcENKNGYYEIPSTGAIR	420
421	Qy	INTOEYLDVLGRPMVLADRAKQVQMTNVYLDALGLVITGTGLPVFNITGQFENKTNLK	480
421	Db	INTOEYLDVLGRPMVLADRAKQVQMTNVYLDALGLVITGTGLPVFNITGQFENKTNLK	480
481	Qy	NOLLGVMGVDVSLDTIKRLTPRTTLCPNGYYFAIDPNGVYLLHPNLQPNKPKSQBPVTL	540
481	Db	NOLLGVMGVDVSLDTIKRLTPRTTLCPNGYYFAIDPNGVYLLHPNLQPK - - - - -BFTVL	535
541	Qy	DFDLAELENDIKVIRNKMIDGSGEKTFTLVKQSODERYIDKGNRTYTWTPVNGTDYSL	600
536	Db	DFDLAELENDIKVIRNKMIDGSGEKTFTLVKQSODERYIDKGNRTYTWTPVNGTDYSL	595
601	Qy	ALVLPYTFYYIRAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI	660
596	Db	ALVLPYTFYYIRAKLEETITQARSKKGKMKDSETLKPDNFEESGYTFIAPRDYCNDLKI	655
661	Qy	SDNNTBELLNFNEFIDRKTPNNPSCNADLNRRVLLDAGFTNELVQNYWSQKNIKGVKAR	720
656	Db	SDNNTBELLNFNEFIDRKTPNNPSCNADLNRRVLLDAGFTNELVQNYWSQKNIKGVKAR	715
721	Qy	FVYTDGGITRVYKPEAGENQWENPEYEDSFYKRSLDNDNYVETAPYFNKSGPGAYESGI	780
716	Db	FVYTDGGITRVYKPEAGENQWENPEYEDSFYKRSLDNDNYVETAPYFNKSGPGAYESGI	775
781	Qy	MVSKAVEIYIQGKLLKPAAVVGIIKDVNSWIENFTKTSIRDPACAGPVCDCKRNSDVMDCVI	840
776	Db	MVSKAVEIYIQGKLLKPAAVVGIIKDVNSWIENFTKTSIRDPACAGPVCDCKRNSDVMDCVI	835
841	Qy	LDDGGFLLMANHDDYTNOIGRFGEIDPSLMRHLVNIYSYAFNKSVDYQSVCEPGAAPKQ	900
836	Db	LDDGGFLLMANHDDYTNOIGRFGEIDPSLMRHLVNIYSYAFNKSVDYQSVCEPGAAPKQ	895
901	Qy	GAGHRSAYVPSVADILQIGWATAAASIIQQFLLSLTFPRLLLEAVEMEDDDDTASLSKQ	960
896	Db	GAGHRSAYVPSVADILQIGWATAAASIIQQFLLSLTFPRLLLEAVEMEDDDDTASLSKQ	955
961	Qy	SCITEQYQYFFDNDSKFSFGLVDCGNGSRIFPHGEKLMNTNLIFIMVESKGTCPDPRLL	1018
956	Db	SCITEQYQYFFDNDSKFSFGLVDCGNGSRIFPHGEKLMNTNLIFIMVESKGTCPDPRLL	1013

RESULT 9  
US-08-455-543A-56  
; Sequence 56, Application US/08455543A  
; Patent No. 5792846  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FastSeq Version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/455,543A  
; FILING DATE: May 31, 1995  
; PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/223,305  
FILING DATE: April 4, 1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 6362-52517  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 56:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1084 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
US-08-455-543A-56

Query Match 98.9%; Score 5289.5; DB 1; Length 1084;

Best Local Similarity 99.2%; Pred. No. 0;

Matches 1010; Conservative 0; Mismatches 1; Indels 7; Gaps 1;

QY 1 MAAGCLLALTLFQSLGIPSEPPFSAVTKSWDKMQEDLVTLAKTAGVNLVDI 60  
Db 1 MAAGCLLALTLFQSLGIPSEPPFSAVTKSWDKMQEDLVTLAKTAGVNLVDI 60  
QY 61 YEKYQDLYTVEPNNAQQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120  
Db 61 YEKYQDLYTVEPNNAQQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120  
QY 121 EVVYNAKDDLPKNDSPGSRQIKPVIEDANFGRIYSQHAHVHIPTDIYEGSTIVL 180  
Db 121 EVVYNAKDDLPKNDSPGSRQIKPVIEDANFGRIYSQHAHVHIPTDIYEGSTIVL 180  
QY 181 NELNWTSADEYFKKNREDDPSSLQVFGSATGLARYYPASVPWDSNRTPNKIDLYDVR 240  
Db 181 NELNWTSADEYFKKNREDDPSSLQVFGSATGLARYYPASVPWDSNRTPNKIDLYDVR 240  
QY 241 RPWYTOGAASPKDMLLVDVSGVSLTLKLRISVSEMLETLSDDDDFNVASFNSNAQD 300  
Db 241 RPWYTOGAASPKDMLLVDVSGVSLTLKLRISVSEMLETLSDDDDFNVASFNSNAQD 300  
QY 301 VSCFQHLVQANVRNKKVLKADVANNITAKGIDYKKGFGFAFQOLLNLYNVRANCKNIIML 360  
Db 301 VSCFQHLVQANVRNKKVLKADVANNITAKGIDYKKGFGFAFQOLLNLYNVRANCKNIIML 360  
QY 361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVQGHYERGPQIWMACENKGYIYIPISGAIR 420  
Db 361 FTDGGEERAQEIFNKYNKDKKVRVFRFSVQGHYERGPQIWMACENKGYIYIPISGAIR 420

QY 421 INTOEYLDVLGRPMVLGADKAKOVQMTNVYLDALGLVITGTLPVFNITGOPENKTNLK 480  
Db 421 INTOEYLDVLGRPMVLGADKAKOVQMTNVYLDALGLVITGTLPVFNITGOPENKTNLK 480  
QY 481 NQILGVMGVDVSLIEDIKRLTFRFTLCPNGYFFAIDPNGYVLLHPLNLPKPKSQBPVTL 540  
Db 481 NQILGVMGVDVSLIEDIKRLTFRFTLCPNGYFFAIDPNGYVLLHPLNLPKPKSQBPVTL 540  
QY 541 DFLDAELNDIKVEIRNKMIDGESGKTRFTLVKSODERYIDKGNRTYTWTPVNGTDYSL 600  
Db 541 DFLDAELNDIKVEIRNKMIDGESGKTRFTLVKSODERYIDKGNRTYTWTPVNGTDYSL 600  
QY 601 ALVLPYSPYYIKALEETITQARSKKGKMOSETLKPONFEESGYTFTIAPRDYCNDLKI 660  
Db 601 ALVLPYSPYYIKALEETITQARSKKGKMOSETLKPONFEESGYTFTIAPRDYCNDLKI 660  
QY 661 SDNTEFLNFEFIDRKTNNPSCNADLINRVLLDAGETNELVQYWSKQKNIKGVKAR 720  
Db 661 SDNTEFLNFEFIDRKTNNPSCNADLINRVLLDAGETNELVQYWSKQKNIKGVKAR 720  
QY 721 FVTDGGITRVYPKEAGENQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
Db 721 FVTDGGITRVYPKEAGENQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
QY 781 MYSKAVEIYIOGKLLKPAVVGIGKIDVNSIENFTKTSIRDPACAGPVDCCKRNSDVNDCVI 840  
Db 781 MYSKAVEIYIOGKLLKPAVVGIGKIDVNSIENFTKTSIRDPACAGPVDCCKRNSDVNDCVI 840  
QY 841 LDDGGFLMANHDDTYNQIGRFFGEIDPSLMRHLVNIYVAFNKSVDYOSVCEPAGAPKQ 900  
Db 841 LDDGGFLMANHDDTYNQIGRFFGEIDPSLMRHLVNIYVAFNKSVDYOSVCEPAGAPKQ 900  
QY 901 GAGHSAYVPSVADILQIGWATAAAWSILQOFLSLTPRLEAVEMEDDDFTASLSKQ 960  
Db 901 GAGHSAYVPSVADILQIGWATAAAWSILQOFLSLTPRLEAVEMEDDDFTASLSKQ 960  
QY 961 SCITBOTQYFFDNDKSFSGVLDCGNCSEFHFGEKLMNTLFIIMVESKGTCPDTRL 1018  
Db 961 SCITBOTQYFFDNDKSFSGVLDCGNCSEFHFGEKLMNTLFIIMVESKGTCPDTRL 1018

RESULT 10

US-08-223-305C-56

; Sequence 56, Application US/08223305C

; Patent No. 5851824

; GENERAL INFORMATION:

; APPLICANT: Harpold, Michael

; APPLICANT: Ellis, Steven

; APPLICANT: Williams, Mark

; APPLICANT: Feldman, Daniel

; APPLICANT: McCue, Ann

; APPLICANT: Brenner, Robert

; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND

; NUMBER OF SEQUENCES: 57

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Brown, Martin, Haller & McClain

; STREET: 1660 Union Street

; CITY: San Diego

; STATE: California

; COUNTRY: USA

; ZIP: 92101-2926

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Diskette

; COMPUTER: IBM Compatible

; OPERATING SYSTEM: DOS

; SOFTWARE: FastSEQ version 1.5

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/223,305C

; FILING DATE: April 4, 1994

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 07/868,354

; FILING DATE: April 10, 1992

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US99/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 52516 (P519739)  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 56:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1084 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
US-08-223-305C-56

Query Match 98.98; Score 5289.5; DB 2; Length 1084;

Best Local Similarity 99.28; Pred. No. 0;  
Matches 1010; Conservative 0; Mismatches 1; Indels 7; Gaps 1;

Qy 1 MAAGCLLALTITLQSLIGSSPEPPSATYIKSWDKMOEDLVTLAKTASGVNQLVDI 60  
Db 1 MAAGCLLALTITLQSLIGSSPEPPSATYIKSWDKMOEDLVTLAKTASGVNQLVDI 60  
Qy 61 YEKYQDLTYVEPNARQVLAARDIEKLLNSRKALVSLALEAEKVOAAHOWREDPASN 120  
Db 61 YEKYQDLTYVEPNARQVLAARDIEKLLNSRKALVSLALEAEKVOAAHOWREDPASN 120  
Qy 121 EWYVYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGROIYSQHAHVHTPTDIYEGSTIVL 180  
Db 121 EWYVYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGROIYSQHAHVHTPTDIYEGSTIVL 180  
Qy 181 NELNWTSALEDFVKKNRDEPSLLQVFGSATGLARYYPASPWDNSRTPNKIDLYDVR 240  
Db 181 NELNWTSALEDFVKKNRDEPSLLQVFGSATGLARYYPASPWDNSRTPNKIDLYDVR 240  
Qy 241 RPWYIQAASPKDMLILVDVSGVSGLTFLKIRTSVSEMLETLDDDDFVNVASNSNAQD 300  
Db 241 RPWYIQAASPKDMLILVDVSGVSGLTFLKIRTSVSEMLETLDDDDFVNVASNSNAQD 300  
Qy 301 VSCFOHLVQANVRNKKVLLKDAVNITAKITDYKKGFSFAEQLLNVNVRANCNKIIML 360  
Db 301 VSCFOHLVQANVRNKKVLLKDAVNITAKITDYKKGFSFAEQLLNVNVRANCNKIIML 360  
Qy 361 FTDGGEERAQEIFNKYNKKVRFVSVGQHNVERGPIQMACENKGYEIPISGAIR 420  
Db 361 FTDGGEERAQEIFNKYNKKVRFVSVGQHNVERGPIQMACENKGYEIPISGAIR 420  
Qy 421 INTQBYLDVLRPMVLAGKAKQVQWNTVYLDALGLVITGTLPVFNITQGFENKTNLK 480  
Db 421 INTQBYLDVLRPMVLAGKAKQVQWNTVYLDALGLVITGTLPVFNITQGFENKTNLK 480  
Qy 481 NQLILGVMGVDVSLIEDIKRLTPRTLCPNGYFFAIDPNGYVLLHNPQKPKSQEPVTL 540

Db 481 NQLILGVMGVDVSLIEDIKRLTPRTLCPNGYFFAIDPNGYVLLHNPQKPKSQEPVTL 540  
Qy 541 DFLDAELENDIKVEIRNMKIDGESGEKTRFLVKSQDRIYDKGNRTYTWTPVNGTDYSL 600  
Db 541 DFLDAELENDIKVEIRNMKIDGESGEKTRFLVKSQDRIYDKGNRTYTWTPVNGTDYSL 600  
Qy 601 ALVLTYSFYIYKAKLEETITQARSKKGMKDSKSETLKPNDNEEESGYTFIAPRDYCNLUKI 660  
Db 601 ALVLTYSFYIYKAKLEETITQARY-----SETLKPNDNEEESGYTFIAPRDYCNLUKI 653  
Qy 661 SDNTEFLANFEETIDRKTNNPCNADLINRVLLDAGFTNELVQNYWSKOKNKGVKAR 720  
Db 654 SDNTEFLANFEETIDRKTNNPCNADLINRVLLDAGFTNELVQNYWSKOKNKGVKAR 713  
Qy 721 FVVDGGITRVYPKEAGENWQENPETVEDSFYKRSNDNDNVFTAPYENKSGPGAYESSGI 780  
Db 714 FVVDGGITRVYPKEAGENWQENPETVEDSFYKRSNDNDNVFTAPYENKSGPGAYESSGI 773  
Qy 781 MVSRAVEIYIOGKLLKPAVVGIIKIDVNSWENFTKTSIRDPACGVPDCCKRNSDVMDCVI 840  
Db 774 MVSRAVEIYIOGKLLKPAVVGIIKIDVNSWENFTKTSIRDPACGVPDCCKRNSDVMDCVI 833  
Qy 841 LDDGGFLLMANHDDYTNOIGRFFGEIDPSLMRHLVNIISVYAFNKSIDYQSVCEPGAAPKQ 900  
Db 834 LDDGGFLLMANHDDYTNOIGRFFGEIDPSLMRHLVNIISVYAFNKSIDYQSVCEPGAAPKQ 893  
Qy 901 GAGHRSAYVPSVADILQIGWATAAANSILOQFLISLTFFRLLAEVEMEDDDFTASLSKQ 960  
Db 894 GAGHRSAYVPSVADILQIGWATAAANSILOQFLISLTFFRLLAEVEMEDDDFTASLSKQ 953  
Qy 961 SCITEQTYQFPDNDKSFSGVLDGCGNCSRIHFHGEKLMNTNLIIFIMVESKGTCPDTRL 1018  
Db 954 SCITEQTYQFPDNDKSFSGVLDGCGNCSRIHFHGEKLMNTNLIIFIMVESKGTCPDTRL 1011

RESULT 11

US-08-455-543A-53  
Sequence 53, Application US/08455543A

Patent No. 5792846

GENERAL INFORMATION:

APPLICANT: Harpold, Michael

APPLICANT: Ellis, Steven

APPLICANT: Williams, Mark

APPLICANT: Feldman, Daniel

APPLICANT: McCue, Ann

APPLICANT: Brenner, Robert

TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND

TITLE OF INVENTION: METHODS

NUMBER OF SEQUENCES: 57

CORRESPONDENCE ADDRESS:

ADDRESSEE: Brown, Martin, Haller & McClain

STREET: 1660 Union Street

CITY: San Diego

STATE: California

COUNTRY: USA

ZIP: 92101-2926

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette

COMPUTER: IBM Compatible

OPERATING SYSTEM: DOS

SOFTWARE: FastSeq Version 1.5

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/455,543A

FILING DATE: May 31, 1995

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/223,305

FILING DATE: April 4, 1994

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 07/868,354

FILING DATE: April 10, 1992

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/745,206

;; FILING DATE: 15-AUG-1991  
;; PRIOR APPLICATION DATA: US 07/620,250  
;; FILING DATE: 30-NOV-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 07/482,384  
;; FILING DATE: 20-FEB-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 07/603,751  
;; FILING DATE: 04-APR-1989  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: WO PCT/US89/01408  
;; FILING DATE: 04-APR-1989  
;; APPLICATION DATA: US 07/176,899  
;; FILING DATE: 04-APR-1988  
;; ATTORNEY/AGENT INFORMATION:  
;; NAME: Seidman, Stephanie L.  
;; REGISTRATION NUMBER: 33,779  
;; REFERENCE/DOCKET NUMBER: 6362-52517  
;; TELECOMMUNICATION INFORMATION:  
;; TELEPHONE: (619)238-0999  
;; TELEFAX: (619)238-0062  
;; INFORMATION FOR SEQ ID NO: 53:  
;; SEQUENCE CHARACTERISTICS:  
;; LENGTH: 1103 amino acids  
;; TYPE: amino acid  
;; STRANDEDNESS: single  
;; TOPOLOGY: linear  
;; MOLECULE TYPE: protein  
;; FRAGMENT TYPE: internal  
US-08-455-543A-53

Query Match 98.6%; Score 5270; DB 1; Length 1103;

Best Local Similarity 97.4%; Pred. No. 0;  
Matches 1010; Conservative 0; Mismatches 1; Indels 26; Gaps 2;

QY 1 MAAGCLLALTLFSLGLGSEPPFSAVTIKSWDKMQEDLVTLAKTASGVNLVDI 60  
DB 1 MAAGCLLALTLFSLGLGSEPPFSAVTIKSWDKMQEDLVTLAKTASGVNLVDI 60  
QY 61 YEKYQDLYTVEPNNAQVLEIAARDIEKLLSNRSLVSLALEAEKVQAAHQWREDFASN 120  
DB 61 YEKYQDLYTVEPNNAQVLEIAARDIEKLLSNRSLVSLALEAEKVQAAHQWREDFASN 120  
QY 121 EVVYNAKDLDPEKNDSPGSGRIKPVFIEDANFGRIQISYQHAHVHPTDIYEGSTIVL 180  
DB 121 EVVYNAKDLDPEKNDSPGSGRIKPVFIEDANFGRIQISYQHAHVHPTDIYEGSTIVL 180  
QY 181 NELNWTSLALDEYFKKNREDDPSLLMQVFGSATGLARYYPASPWDNSRTPNPKIDLYDVR 240  
DB 181 NELNWTSLALDEYFKKNREDDPSLLMQVFGSATGLARYYPASPWDNSRTPNPKIDLYDVR 240  
QY 241 RPWYTOGAASPKDMLLDVDSVSGSLTKLRTSVSEMLETLSDDDDFVNVASFNSNAOD 300  
DB 241 RPWYTOGAASPKDMLLDVDSVSGSLTKLRTSVSEMLETLSDDDDFVNVASFNSNAOD 300  
QY 301 VSCFQHLVQANRNKVKLVADANNITAKGIDYKKGFSFAPFQOLLNRYNVRANCKNIIML 360  
DB 301 VSCFQHLVQANRNKVKLVADANNITAKGIDYKKGFSFAPFQOLLNRYNVRANCKNIIML 360  
QY 361 FTDGGEERAQEIFNKYNKDKKVRFRFSVQGHNYERGPQIOMACENKGYIYIPISGAIR 420  
DB 361 FTDGGEERAQEIFNKYNKDKKVRFRFSVQGHNYERGPQIOMACENKGYIYIPISGAIR 420  
QY 421 INTQEYLDVILGPRWLAGDKAKOVQWNTVYLDALGLGLVITGLPVFNITGOFENKTNLK 480  
DB 421 INTQEYLDVILGPRWLAGDKAKOVQWNTVYLDALGLGLVITGLPVFNITGOFENKTNLK 480  
QY 481 NQLILGVMGVDVSLIEDIKRLTPRFTLCPNGYYFAIDPNCYVLLHNPLOPK----- 530  
DB 481 NQLILGVMGVDVSLIEDIKRLTPRFTLCPNGYYFAIDPNCYVLLHNPLOPKPIGVGPIPTIN 540

QY 531 -----NPKSQBPVTLDFLDAELENIDKVEIRNKMIDGESGEKTFRTLVSQDERYI 581  
DB 541 LRRRRENIQNPXSQBPVTLDFLDAELENIDKVEIRNKMIDGESGEKTFRTLVSQDERYI 600  
QY 582 DKGNRITYTTPVNGTDYSLALVLPYTSFYIKAKLEETLQOARSKGKMKDSETLPDNF 641  
DB 601 DKGNRITYTTPVNGTDYSLALVLPYTSFYIKAKLEETLQOARSKGKMKDSETLPDNF 653  
QY 642 EESGYTFIAPROYCNDLKISDNNTEFLNFEIDRKTPNPNPCNADLINRVLLDAGFTN 701  
DB 654 EESGYTFIAPROYCNDLKISDNNTEFLNFEIDRKTPNPNPCNADLINRVLLDAGFTN 713  
QY 702 ELVQNTWSKQNIKGVKARFVTDGGITRVYPKEAGENWOENPETEYDSFYKRSLONDNY 761  
DB 714 ELVQNTWSKQNIKGVKARFVTDGGITRVYPKEAGENWOENPETEYDSFYKRSLONDNY 773  
QY 762 VFTAPYFNKSGPCAYESGIMVSKAVEIYQGLKLPVAVGVIKIDVNSWIENFTKSTRDP 821  
DB 774 VFTAPYFNKSGPCAYESGIMVSKAVEIYQGLKLPVAVGVIKIDVNSWIENFTKSTRDP 833  
QY 822 CAGPVCDCRNSDVMDCVILDDGGFLLMANHDDYTQIGRFFGEIDPSLMRHLVNSIYVA 881  
DB 834 CAGPVCDCRNSDVMDCVILDDGGFLLMANHDDYTQIGRFFGEIDPSLMRHLVNSIYVA 893  
QY 882 FNKSYDYQSVCEPGAAPKOGAGHRSAYVPSVADILQIGWATAAANSILOQFLSLTFPR 941  
DB 894 FNKSYDYQSVCEPGAAPKOGAGHRSAYVPSVADILQIGWATAAANSILOQFLSLTFPR 953  
QY 942 LLEAVEMEDDDFTASLSKOSCITEQTYQFFDNDKSFSGVLDGCGSRIFPHGKLMNTNL 1001  
DB 954 LLEAVEMEDDDFTASLSKOSCITEQTYQFFDNDKSFSGVLDGCGSRIFPHGKLMNTNL 1013  
QY 1002 IFIMVESKGTCPCDTRL 1018  
DB 1014 IFIMVESKGTCPCDTRL 1030

## RESULT 12

US-08-223-305C-53  
; Sequence 53, Application US/08223305C  
; Patent No. 5851824  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FastSEQ Version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/223,305C  
; FILING DATE: April 4, 1994  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/868,354  
; FILING DATE: April 10, 1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 52516 (P519739)  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 53:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1103 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
US-08-223-305C-53

Query Match 98.6% Score 5270; DB 2; Length 1103;  
Best Local Similarity 97.4%; Pred. No. 0;  
Matches 1010; Conservative 0; Mismatches 1; Indels 26; Gaps 2;  
QY 1 MAAGCLLALTLTFLQSLIGPSSPEPPSAVTIKSWDKMQEDLVTLAKTASGVNQLVDI 60  
DB 1 MAAGCLLALTLTFLQSLIGPSSPEPPSAVTIKSWDKMQEDLVTLAKTASGVNQLVDI 60  
QY 61 YEKYQDLYTEPNARQIVETAARDIEKLISNRSKALVSLALEAEKVQAAHQWREDFASN 120  
DB 61 YEKYQDLYTEPNARQIVETAARDIEKLISNRSKALVSLALEAEKVQAAHQWREDFASN 120  
QY 121 EVVYNAKDDLDPEKNDESPGSGRIKPVFIEDANFGQISYQHAHVHPTDIYEGSTIVL 180  
DB 121 EVVYNAKDDLDPEKNDESPGSGRIKPVFIEDANFGQISYQHAHVHPTDIYEGSTIVL 180  
QY 181 NELNWTSAIDVFKKNEEDPSLLWQVFGSATGLARYYPASWPVDNSRTPNKIDLYDVR 240  
DB 181 NELNWTSAIDVFKKNEEDPSLLWQVFGSATGLARYYPASWPVDNSRTPNKIDLYDVR 240  
QY 241 RPWYIQGAASPKDMLILVDVSGVSGUTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300  
DB 241 RPWYIQGAASPKDMLILVDVSGVSGUTLKLIRTSVSEMLETLSDDDFVNVASFNSNAQD 300  
QY 301 VSCFQHLVQANVRNKKVYLDKAVNNITAKGTDYKKGFSFAFEQLLNTVNSRANCNKIIML 360  
DB 301 VSCFQHLVQANVRNKKVYLDKAVNNITAKGTDYKKGFSFAFEQLLNTVNSRANCNKIIML 360  
QY 361 FTDGGEERAQEIFNKNKKVRFVRSVGOHNYERGIQWACENKGYIYEIPSGAIR 420  
DB 361 FTDGGEERAQEIFNKNKKVRFVRSVGOHNYERGIQWACENKGYIYEIPSGAIR 420  
QY 421 INTQEYLDVLRPMVLAGDKAKQVQWNVYLDALGLVITGLTPVFNITQGFENKTNLK 480  
DB 421 INTQEYLDVLRPMVLAGDKAKQVQWNVYLDALGLVITGLTPVFNITQGFENKTNLK 480  
QY 481 NQLILGVMGVDSLEDKRLTPRETLCPNGYFFAIDPNGYVLLHPNLQPK----- 530  
DB 481 NQLILGVMGVDSLEDKRLTPRETLCPNGYFFAIDPNGYVLLHPNLQPKPIGVIGIPTIN 540

QY 531 -----NPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 581  
DB 541 LKRRPNQPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTLVKSQDERYI 600  
QY 582 DKGNTYTTWTPVNGTDYSLALVLPYTFYFYIKAKLETITQARSKKGMKMDSETLKPDNF 641  
DB 601 DKGNTYTTWTPVNGTDYSLALVLPYTFYFYIKAKLETITQARY-----SETLKPDNF 653  
QY 642 EESGYTFIAPRDYCNLDKISDNNTFLLNFEFIDRTKPNPNSCNADLINRVLLDAGFTN 701  
DB 654 EESGYTFIAPRDYCNLDKISDNNTFLLNFEFIDRTKPNPNSCNADLINRVLLDAGFTN 713  
QY 702 ELVQNYWSKQKNIKGVKARFVTDGGITRVYKPEAGENWQENPETYEDSFYKRSLDNDNY 761  
DB 714 ELVQNYWSKQKNIKGVKARFVTDGGITRVYKPEAGENWQENPETYEDSFYKRSLDNDNY 773  
QY 762 VFTAPYFNKSGPGAYESGIMVSKAVEIYIOGKLLKPAVVGKIDVNSWIENFTKTSIRDP 821  
DB 774 VFTAPYFNKSGPGAYESGIMVSKAVEIYIOGKLLKPAVVGKIDVNSWIENFTKTSIRDP 833  
QY 822 CAGPVCCKRNSDVMDCVILDDGGFLMANHDDYTNQIGRFFGEIDPSLMRHLVNSIYIA 881  
DB 834 CAGPVCCKRNSDVMDCVILDDGGFLMANHDDYTNQIGRFFGEIDPSLMRHLVNSIYIA 893  
QY 882 FNKSYDYQSVCEPGAAPKQAGHRSAYVPSVADILQIGWATAAAWSILOQFLSLTFPR 941  
DB 894 FNKSYDYQSVCEPGAAPKQAGHRSAYVPSVADILQIGWATAAAWSILOQFLSLTFPR 953  
QY 942 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSDSKSGVLDCCNCSRIHGEKLMNTNL 1001  
DB 954 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSDSKSGVLDCCNCSRIHGEKLMNTNL 1013  
QY 1002 IFIMVESKGTCPDTRL 1018  
DB 1014 IFIMVESKGTCPDTRL 1030

## RESULT 13

US-08-455-543A-55  
Sequence 55, Application US/08455543A  
Patent No. 5792846  
GENERAL INFORMATION:  
APPLICANT: Harpold, Michael  
APPLICANT: Ellis, Steven  
APPLICANT: Williams, Mark  
APPLICANT: Feldman, Daniel  
APPLICANT: McCue, Ann  
APPLICANT: Brenner, Robert  
TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
TITLE OF INVENTION: METHODS  
NUMBER OF SEQUENCES: 57  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Brown, Martin, Haller & McClain  
STREET: 1660 Union Street  
CITY: San Diego  
STATE: California  
COUNTRY: USA  
ZIP: 92101-2926  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/455,543A  
FILING DATE: May 31, 1995  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/223,305  
FILING DATE: April 4, 1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 6362-52517  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 55:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1079 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
US-08-455-543A-55

Query Match 98.2%; Score 5250; DB 1; Length 1079;

Best Local Similarity 98.7%; Pred. No. 0;  
Matches 1005; Conservative 0; Mismatches 1; Indels 12; Gaps 2;

QY 1 MAAGCLLALTLFQSLGIPSEPPFPKSAVTKSWDKMQEDLVLTAKTAGVNLVDI 60  
DB 1 MAAGCLLALTLFQSLGIPSEPPFPKSAVTKSWDKMQEDLVLTAKTAGVNLVDI 60  
QY 61 YEKYQDLTYVEPNNAQLVEIAARDIEKLLSNRSKALVSLALEAEKVAQAHOQWREDFASN 120  
DB 61 YEKYQDLTYVEPNNAQLVEIAARDIEKLLSNRSKALVSLALEAEKVAQAHOQWREDFASN 120  
QY 121 EVVYNAKDDLOPEKNDSEPGSORIKPVIEDANFGROIYQHAHVHIPTDIYEGSTIVL 180  
DB 121 EVVYNAKDDLOPEKNDSEPGSORIKPVIEDANFGROIYQHAHVHIPTDIYEGSTIVL 180  
QY 181 NELNWTSALEDEVFKKNREDDPILLWQVFGSATGLARYYPASFPWVDSNRTPNKLIDLYDVR 240  
DB 181 NELNWTSALEDEVFKKNREDDPILLWQVFGSATGLARYYPASFPWVDSNRTPNKLIDLYDVR 240  
QY 241 RPWYIQAASPKDMLILVDVSGVSLTLKLTISYSEMLETISDDDFVNASFNSNAOD 300  
DB 241 RPWYIQAASPKDMLILVDVSGVSLTLKLTISYSEMLETISDDDFVNASFNSNAOD 300  
QY 301 VSCFQHLVQANVRNKKVLKDAVNNITAKITDYKKGFSFAPFOLLNINVRANCNKIIML 360  
DB 301 VSCFQHLVQANVRNKKVLKDAVNNITAKITDYKKGFSFAPFOLLNINVRANCNKIIML 360  
QY 361 FTDGGEERAQEIFNKNYKDKVRFVSQHNRYERGPLOMACKENKGYIYEIPSTIGAIR 420  
DB 361 FTDGGEERAQEIFNKNYKDKVRFVSQHNRYERGPLOMACKENKGYIYEIPSTIGAIR 420  
QY 421 INTQEYLDVLRPMVLGADKAKQVQWNTVYLDALGLVITGTLPVFNITGTFENKTNLK 480  
DB 421 INTQEYLDVLRPMVLGADKAKQVQWNTVYLDALGLVITGTLPVFNITGTFENKTNLK 480  
QY 481 NQLILGVMGVDSLEDIKRLTFRFTLCPNGYYFAIDPNGYVLLHPNLQPKSPQEPVTL 540  
DB 481 NQLILGVMGVDSLEDIKRLTFRFTLCPNGYYFAIDPNGYVLLHPNLQPKSPQEPVTL 540

DB 481 NQLILGVMGVDSLEDIKRLTFRFTLCPNGYYFAIDPNGYVLLHPNLQPKSPQEPVTL 535  
QY 541 DFLDAELENIDKVEIRNKMIDGESGKTFRTLVKSODERYIDKGNRTYTTWTPVNGTDYSL 600  
DB 536 DFLDAELENIDKVEIRNKMIDGESGKTFRTLVKSODERYIDKGNRTYTTWTPVNGTDYSL 595  
QY 601 ALVLPYSPYIIKAKLEETITQARSKKGMKQSETLKPDPNFESGYTFTIAPRDYCNLDKI 660  
DB 596 ALVLPYSPYIIKAKLEETITQARY-----SETLKPDPNFESGYTFTIAPRDYCNLDKI 648  
QY 661 SDNTEFLNFEFIDRKTNNPNSCNADLINRVLLDAGFTNELVQYWSKQKNIKGVKAR 720  
DB 649 SDNTEFLNFEFIDRKTNNPNSCNADLINRVLLDAGFTNELVQYWSKQKNIKGVKAR 708  
QY 721 FVVTGGITRVYPKEAGENQENPETEYDFYKRSLDNDNYFTAPYFNKSGPGAYESGI 780  
DB 709 FVVTGGITRVYPKEAGENQENPETEYDFYKRSLDNDNYFTAPYFNKSGPGAYESGI 768  
QY 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSWIENFTKTSIRDPACAGPVCDCRNSDMVDCVI 840  
DB 769 MYSKAVEIYIOGKLLKPAVVGKIDVNSWIENFTKTSIRDPACAGPVCDCRNSDMVDCVI 828  
QY 841 LDDGGFLMANHDDYTNOIGREFGEIDPSLMRHLVNI SVYAFNKSVDYQSVCEPGAAPKQ 900  
DB 829 LDDGGFLMANHDDYTNOIGREFGEIDPSLMRHLVNI SVYAFNKSVDYQSVCEPGAAPKQ 888  
QY 901 GAGHSAYVPSVADILQIGWATAAAWSILOQFLLSLTPRLLLEAVEMEDDDFTASLSKQ 960  
DB 889 GAGHSAYVPSVADILQIGWATAAAWSILOQFLLSLTPRLLLEAVEMEDDDFTASLSKQ 948  
QY 961 SCITEQTYFFDNDSKFSFGLDCGNCRIFFHGEKLMNTNLIFIMVESKGTCPCDTRL 1018  
DB 949 SCITEQTYFFDNDSKFSFGLDCGNCRIFFHGEKLMNTNLIFIMVESKGTCPCDTRL 1006

RESULT 14

US-08-223-305C-55  
; Sequence 55, Application US/08223305C  
; Patent No. 5851824  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FASTSEQ Version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/223,305C  
; FILING DATE: April 4, 1994  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/868,354  
; FILING DATE: April 10, 1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/620,250  
; FILING DATE: 30-NOV-1990

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
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PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 52516 (P519739)  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 55:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1079 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
US-08-223-305C-55

Query Match 98.2%; Score 5250; DB 2; Length 1079;  
Best Local Similarity 98.7%; Pred. No. 0;  
Matches 1005; Conservative 0; Mismatches 1; Indels 12; Gaps 2;  
QY 1 MAACCLALTLTQSLIGSSSEPPPSAVTIKSWDKMQEDLVTLAKTASGVNQLVDI 60  
DB 1 MAACCLALTLTQSLIGSSSEPPPSAVTIKSWDKMQEDLVTLAKTASGVNQLVDI 60  
QY 61 YEKYQDLYTVEPNARQLVEIARIDIEKLSNRKALVSLALEAEKVOAHOHREDFASN 120  
DB 61 YEKYQDLYTVEPNARQLVEIARIDIEKLSNRKALVSLALEAEKVOAHOHREDFASN 120  
QY 121 EYVYNKADLDPEKNSEPGSQRIKPVFIEDANFGRIQISYQHAHVHPTDIYEGSTIVL 180  
DB 121 EYVYNKADLDPEKNSEPGSQRIKPVFIEDANFGRIQISYQHAHVHPTDIYEGSTIVL 180  
QY 181 NELNWTSLDVEFKKREEDPSLLQVFGSATGLARYPASPWDNSRTPNKKIDLYDVR 240  
DB 181 NELNWTSLDVEFKKREEDPSLLQVFGSATGLARYPASPWDNSRTPNKKIDLYDVR 240  
QY 241 RPWYIQAASPKDMLILVDVSGVSGLTCLKLIRTSVSEMLETLSDDDFVNVSFNSNAQD 300  
DB 241 RPWYIQAASPKDMLILVDVSGVSGLTCLKLIRTSVSEMLETLSDDDFVNVSFNSNAQD 300  
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US-08-435-675B-5  
Sequence 5, Application US/08435675B  
Patent No. 5710250  
GENERAL INFORMATION:  
APPLICANT: Ellis, Steven Bradley  
APPLICANT: Williams, Mark E.  
APPLICANT: Harpold, Michael Miller  
APPLICANT: Schwartz, Arnold  
APPLICANT: Brenner, Robert  
TITLE OF INVENTION: CALCIUM CHANNEL COMPOSITIONS AND METHODS  
NUMBER OF SEQUENCES: 6  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Brown, Martin, Haller & McClain  
STREET: 1660 Union Street  
CITY: San Diego  
STATE: CA  
COUNTRY: USA  
ZIP: 92101-2926  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/435,675B  
FILING DATE: 05-MAY-1995  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/314,083  
FILING DATE: 28-SEP-1994  
APPLICATION NUMBER: US 07/914,231  
FILING DATE: 13-JUL-1992  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 08-NOV-1990  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 6362-53193  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 619-238-0999  
TELEFAX: 619-238-0062  
TELEX:



; INFORMATION FOR SEQ ID NO: 5:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 1106 amino acids

; TYPE: amino acid

; STRANDEDNESS: single

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; FRAGMENT TYPE: internal

; US-08-435-675B-5

Query Match 96.1%; Score 5137.5; DB 1; Length 1106;

Best Local Similarity 94.8%; Pred. No. 0;

Matches 986; Conservative 13; Mismatches 12; Indels 29; Gaps 4;

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Job time: 31315 sec





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Date: Jun 8, 2001 7:52 PM

About: Results were produced by the GenCore software, version 4.5,  
Copyright (c) 1993-2000 Compugen Ltd.

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; Patent No. (5429921)
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: McCue, Ann
; APPLICANT: Feldman, Daniel
; TITLE OF INVENTION: Human Calcium Channel Compositions and
; TITLE OF INVENTION: Methods
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fitch, Even, Tabin & Flannery
; STREET: 135 S. LaSalle
; CITY: Chicago
; STATE: Illinois
; COUNTRY: U.S.A.
; ZIP: 60603
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07745,206A
; FILING DATE: 19910815
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Feder, Scott B
; REFERENCE/DOCKET NUMBER: 51504
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312-372-7842
; INFORMATION FOR SEQ ID NO: 24:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3566 base pairs
; TYPE: NUCLEIC ACID
; STRANDEDNESS: unknown
; TOPOLOGY: unknown
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; NAME/KEY: CDS
; LOCATION: 1..3273
; US-07-745-206A-24
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seq_documentation_block:
: Sequence 24, Application US/08311363
: Patent No. 5876958
: GENERAL INFORMATION:
: APPLICANT: Harpold, Michael
: APPLICANT: Ellis, Steven
: APPLICANT: Williams, Mark
: APPLICANT: Feldman, Daniel
: APPLICANT: McCue, Ann
: APPLICANT: Brenner, Robert
: TITLE OF INVENTION: Human Calcium Channel Compositions and
: NUMBER OF SEQUENCES: 32
: CORRESPONDENCE ADDRESS:
: ADDRESSEE: Brown, Martin, Hallier & McClain
: STREET: 1660 Union Street
: CITY: San Diego
: STATE: California
: COUNTRY: USA
: ZIP: 92101-2926
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Floppy disk
: COMPUTER: IBM PC compatible
: OPERATING SYSTEM: PC-DOS/MS-DOS
: SOFTWARE: Patentin Release #1.0, Version #1.25
: CURRENT APPLICATION DATA:
: APPLICATION NUMBER: US/08/311.363
: FILING DATE:
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: US 07/745,206
: FILING DATE: 15-AUG-1991
: ATTORNEY/AGENT INFORMATION:
: NAME: Seidman, Stephanie L.
: REGISTRATION NUMBER: 33,779
: REFERENCE/DOCKET NUMBER: 6362-51506
: TELECOMMUNICATION INFORMATION:
: TELEPHONE: (619)238-0999
: TELEFAX: (619)238-0062
: INFORMATION FOR SEQ ID NO: 24:
: SEQUENCE CHARACTERISTICS:
: LENGTH: 3566 base pairs
: TYPE: nucleic acid
: STRANDEDNESS: unknown
: TOPOLOGY: unknown
: MOLECULE TYPE: DNA (genomic)
: FEATURE:
: NAME/KEY: CDS
: LOCATION: 1..3273
: US-08-311-363-24
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 Ratio: 5.251 Gaps: 0  
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## alignment\_block:

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seq\_documentation\_block:

; Sequence 11, Application US/08455543A

; Patent No. 5792846

; GENERAL INFORMATION:

; APPLICANT: Harpold, Michael

; APPLICANT: Ellis, Steven

; APPLICANT: Williams, Mark

; APPLICANT: Feldman, Daniel

; APPLICANT: McCue, Ann

; APPLICANT: Brenner, Robert

; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND

; TITLE OF INVENTION: METHODS

; NUMBER OF SEQUENCES: 57

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Brown, Martin, Haller & McClain

; STREET: 1660 Union Street

; CITY: San Diego

; STATE: California

; COUNTRY: USA

; ZIP: 92101-2926

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Diskette

; COMPUTER: IBM Compatible

; OPERATING SYSTEM: DOS

; SOFTWARE: FastSeq Version 1.5

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/455,543A

; FILING DATE: May 31, 1995

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/223,305

; FILING DATE: April 4, 1994

; PRIOR APPLICATION DATA:





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1 TITLE OF INVENTION: METHODS
2 NUMBER OF SEQUENCES: 29
3 CORRESPONDENCE ADDRESS:
4 ADDRESSEE: BROWN, MARTIN, HALLER & MCCLAIN
5 STREET: 1660 UNION STREET
6 CITY: SAN DIEGO
7 STATE: CA
8 COUNTRY: USA
9 ZIP: 92101
10 COMPUTER READABLE FORM:
11 MEDIUM TYPE: Floppy disk
12 COMPUTER: IBM PC compatible
13 OPERATING SYSTEM: PC-DOS/MS-DOS
14 SOFTWARE: PatentIn Release #1.0, Version #1.25
15 CURRENT APPLICATION DATA:
16 APPLICATION NUMBER: US/08/193,078B
17 FILING DATE: 07-FEB-1994
18 CLASSIFICATION: 435
19 PRIOR APPLICATION DATA:
20 APPLICATION NUMBER: US 07/868,354
21 FILING DATE: 10-APR-1992
22 PRIOR APPLICATION DATA:
23 APPLICATION NUMBER: US 07/745,206
24 FILING DATE: 15-AUG-1991
25 ATTORNEY/AGENT INFORMATION:
26 NAME: Seidman, Stephanie L.
27 REGISTRATION NUMBER: 33,779
28 REFERENCE/DOCKET NUMBER: 6362-53607
29 TELECOMMUNICATION INFORMATION:
30 TELEPHONE: 619-238-0999
31 TELEFAX: 619-238-0062
32 INFORMATION FOR SEQ ID NO: 11:
33 SEQUENCE CHARACTERISTICS:
34 LENGTH: 3600 base pairs
35 TYPE: nucleic acid
36 STRANDEDNESS: double
37 TOPOLOGY: linear
38 MOLECULE TYPE: DNA (genomic)
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44 NAME/KEY: 5'UTR
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47 NAME/KEY: 3'UTR
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**TITLE OF INVENTION**

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: Patent No. 5851824
: GENERAL INFORMATION:
: APPLICANT: Harpold, Michael
: APPLICANT: Ellis, Steven
: APPLICANT: Williams, Mark
: APPLICANT: Feldman, Daniel
: APPLICANT: McCue, Ann
: APPLICANT: Brenner, Robert
: TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND
: TITLE OF INVENTION: METHODS
: NUMBER OF SEQUENCES: 57
: CORRESPONDENCE ADDRESS:
: STREET: 1660 Union Street
: CITY: San Diego
: STATE: California
: COUNTRY: USA
: ZIP: 92101-2926
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Diskette
: COMPUTER: IBM Compatible
: OPERATING SYSTEM: DOS
: SOFTWARE: FastSeq Version 1.5
: CURRENT APPLICATION DATA:
: APPLICATION NUMBER: US/08/223.305C
: FILING DATE: April 4, 1994
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: 07/868,354
: FILING DATE: April 10, 1992
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: US 07/745,206
: FILING DATE: 15-AUG-1991
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: US 07/620,250
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: APPLICATION NUMBER: US 07/482,384
: FILING DATE: 20-FEB-1990
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: US 07/603,751
: FILING DATE: 04-APR-1989
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: WO PCT/US89/01408
: FILING DATE: 04-APR-1989
: ATTORNEY/AGENT INFORMATION:
: NAME: Seidman, Stephanie L.
: REGISTRATION NUMBER: 33,779
: REFERENCE/DOCKET NUMBER: 52516 (P519739)
: TELECOMMUNICATION INFORMATION:
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; TELEPHONE: (619)238-0999  
 ; TELEFAX: (619)238-0062  
 ; INFORMATION FOR SEQ ID NO: 11:  
 ; SEQUENCE CHARACTERISTICS:  
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 ; TYPE: nucleic acid  
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 ; MOLECULE TYPE: DNA (genomic)  
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; Sequence 33, Application US/08223305C  
; Patent No. 5851824  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert

;; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
;; TITLE OF INVENTION: METHODS  
;; NUMBER OF SEQUENCES: 57  
;; CORRESPONDENCE ADDRESS:  
;; ADDRESSEE: Brown, Martin, Haller & McClain  
;; STREET: 1660 Union Street  
;; CITY: San Diego  
;; STATE: California  
;; COUNTRY: USA  
;; ZIP: 92101-2926  
;; COMPUTER READABLE FORM:  
;; MEDIUM TYPE: Diskette  
;; COMPUTER: IBM Compatible  
;; OPERATING SYSTEM: DOS  
;; SOFTWARE: FastSeq Version 1.5  
;; CURRENT APPLICATION DATA:  
;; APPLICATION NUMBER: US/08/223,305C  
;; FILING DATE: April 4, 1994  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/868,354  
;; FILING DATE: April 10, 1992  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 07/745,206  
;; FILING DATE: 15-AUG-1991  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 07/620,250  
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;; APPLICATION NUMBER: US 07/482,384  
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;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 07/603,751  
;; FILING DATE: 04-APR-1989  
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;; APPLICATION NUMBER: WO PCT/US89/01408  
;; FILING DATE: 04-APR-1989  
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;; APPLICATION NUMBER: US 07/176,899  
;; FILING DATE: 04-APR-1988  
;; ATTORNEY/AGENT INFORMATION:  
;; NAME: Seidman, Stephanie L.  
;; REGISTRATION NUMBER: 33,779  
;; REFERENCE/DOCKET NUMBER: 52516 (P519739)  
;; TELECOMMUNICATION INFORMATION:  
;; TELEPHONE: (619)238-0999  
;; TELEFAX: (619)238-0062  
;; INFORMATION FOR SEQ ID NO: 33:  
;; SEQUENCE CHARACTERISTICS:  
;; LENGTH: 3600 base pairs  
;; TYPE: nucleic acid  
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; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; NUMBER OF SEQUENCES: 40

; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926

; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC Compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/149,097D  
; FILING DATE: 05-NOV-1993

; CLASSIFICATION: 435  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/105,536  
; FILING DATE: 11-AUG-1993  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/US92/06903  
; FILING DATE: 14-AUG-1992

; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/914,231  
; FILING DATE: 13-JUL-1992  
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; APPLICATION NUMBER: US 07/868,354  
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; FILING DATE: 20-FEB-1990  
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; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/US89/01408  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
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; FILING DATE: 04-APR-1988  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 6362-55038  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619) 238-0999  
; TELEFAX: (619) 238-0062  
; INFORMATION FOR SEQ ID NO: 11:  
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; TYPE: nucleic acid  
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; Patent No. 6090623
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: McCue, Ann
; APPLICANT: Gillespie, Allison
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND
; TITLE OF INVENTION: METHODS
; NUMBER OF SEQUENCES: 38
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Brown, Martin, Hallier & McClain
; STREET: 1660 Union Street
; CITY: San Diego
; STATE: California
; COUNTRY: US
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; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/290,012
; FILING DATE: 11-AUG-1994
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; APPLICATION NUMBER: 08/105,536
; FILING DATE: 11-AUG-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Seidman, Stephanie L.
; REGISTRATION NUMBER: 33,779
; REFERENCE/DOCKET NUMBER: 519808
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619) 238-0999
; TELEFAX: (619) 238-0062
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3600 base pairs
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SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:



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; Patent No. 6140485
; GENERAL INFORMATION:
; APPLICANT: Franco, Rodrigo
; APPLICANT: Sun Chen, Ai Ru
; APPLICANT: Suey, David J.
; TITLE OF INVENTION: NUCLEIC ACID ENCODING HUMAN NEURONAL
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; TITLE OF INVENTION: CALCIUM CHANNEL SUBUNITS
; NUMBER OF SEQUENCES: 6
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
; STREET: Two Militia Drive
; CITY: Lexington
; STATE: MA
; COUNTRY: USA
; ZIP: 02173-4799
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/452.007
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/713,118
; FILING DATE: 16-SEP-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Mata, Elizabeth W.
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; REFERENCE/DOCKET NUMBER: ACC96-01
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; TELEPHONE: 617-861-6240
; TELEFAX: 617-861-9540
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3298 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 20..3292
; US-09-452-007-3
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alignment_scores:
Quality: 5342.00 Length: 1018
Ratio: 5.248 Gaps: 0
Percent Similarity: 100.000 Percent Identity: 99.902
alignment_block:
US-09-397-548-15 x US-09-452-007-3
Align seg 1/1 to: US-09-452-007-3 from: 1 to: 3298
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17 uLeuIleGlyProSerSerGluGluProPheProSerAlaValThrIleL 34
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70 GCTATCGGCCCTCGTCGGAGAGCGCTTCCTTCGGCCGCTCACTATCA 119
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34 ySerTrpValAspLysMetGlnGluAspLeuValThrLeuAlaLysThr 50
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51 AlaSerGlyValAsnGlnLeuValAspIleTyrGluLysTyrGlnAspLe 67
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84 rGAspIleGluLysLeuLeuSerAsnArgSerLysAlaLeuValSerLeu 100
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 101 AlaLeuGluAlaGluLysValGlnAlaAlaHisGlnTrpArgGluAspH 117  
 320 GCATTGGAGCGGAGAAAGTTCAAGCAGCTCACCAGTGGAGAGAAATTT 369  
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 370 TGCAGCAATGAAGTTGTCTACTACAAATGCAAGGATGATCTCGATCCTG 419  
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 151 GluAspAlaAsnPheGlyArgGlnIleSerTyrGlnHisAlaAlaValHI 167  
 470 GAAGATGCTAAATTTGGACACAAATATCTTATCAGCAGCAGCAGTCCA 519  
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 520 TATTCCTACTGACATCTATGAGGGCTCAACAATGTGTAAATGAACCTCA 569  
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 217 rTyrProAlaSerProTrpValAspAsnSerArgThrProAsnLysIleA 234  
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 234 sLeuTyrAspValArgArgProTrpTyrIleGlnGlyAlaAlaSer 250  
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; TOPOLOGY: linear  
 ; MOLECULE TYPE: Genomic DNA  
 ; HYPOTHETICAL: NO  
 ; ANTI-SENSE: NO  
 ; FRAGMENT TYPE:  
 ; ORIGINAL SOURCE:  
 ; FEATURE:  
 ; NAME/KEY: Coding Sequence  
 ; LOCATION: 35...3364  
 ; OTHER INFORMATION: Standard name "alpha2"  
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## alignment\_scores:

Quality: 5326.50 Length: 1037  
 Ratio: 5.232 Gaps: 1  
 Percent Similarity: 98.168 Percent Identity: 98.168

## alignment\_block:

US-09-397-548-15 x US-08-455-543A-20

Align seg 1/1 to: US-08-455-543A-20 from: 1 to: 3657

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seq\_name: /cgn2\_6/ptodata/2/ina/5b\_COMB.seq:US-08-223-305C-20  
seq\_documentation\_block:  
; Sequence 20, Application US/08223305C  
; Patent No. 5851824  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann

APPLICANT: Brenner, Robert  
TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND METHODS  
NUMBER OF SEQUENCES: 57  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Brown, Martin, Haller & McClain  
STREET: 1660 Union Street  
CITY: San Diego  
STATE: California  
COUNTRY: USA  
ZIP: 92101-2926  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/223,305C  
FILING DATE: April 4, 1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
PRIOR APPLICATION DATA:  
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FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 52516 (P519739)  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 20:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 3657 base pairs  
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STRANDEDNESS: double  
TOPOLOGY: linear  
MOLECULE TYPE: Genomic DNA  
HYPOTHETICAL: NO  
ANTI-SENSE: NO  
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; Patent No. 5792846
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: Feldman, Daniel
; APPLICANT: McCue, Ann
; APPLICANT: Brenner, Robert
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND
; TITLE OF INVENTION: METHODS
; NUMBER OF SEQUENCES: 57
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Brown, Martin, Haller & McClain
; STREET: 1660 Union Street
; CITY: San Diego
; STATE: California
; COUNTRY: USA
; ZIP: 92101-2926
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq Version 1.5
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/455.543A
; FILING DATE: May 31, 1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/223.305

; FILING DATE: April 4, 1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/868.354
; FILING DATE: April 10, 1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/745.206
; FILING DATE: 15-AUG-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/620.250
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; FILING DATE: 20-FEB-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/603.751
; FILING DATE: 04-APR-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US89/01408.
; FILING DATE: 04-APR-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/176.899
; FILING DATE: 04-APR-1988
; ATTORNEY/AGENT INFORMATION:
; NAME: Seidman, Stephanie L.
; REGISTRATION NUMBER: 33,779
; REFERENCE/DOCKET NUMBER: 6362-52517
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619)238-0999
; TELEFAX: (619)238-0062
; INFORMATION FOR SEQ ID NO: 34:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3585 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
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 634 luThrLeuLysProAspAsnPheGluGluSerGlyTyrThrPheIleAla 650  
 1920 AAACCTGAGCCAGATATAATTTTGAGAAATCTGGCTATACATTATAGCA 1969  
 651 ProArgAspTyrCysAsnAspLeuLysIleSerAspAsnThrGluPh 667  
 1970 CCAAGAGATTACTGCAATGACCTGAAAAATATCGGATAATAAACACTGAA 2019

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667 eLeuLeuAsnPheAsnGluPheIleAspArgLysThrProAsnAsnProS 684
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2020 TCATTAAATTTCAACGAGTTTATTGATGAAAACTCCAAACAACCCAT 2069
684 erCysAsnAlaAspLeuIleAsnArgValLeuLeuAspAlaGlyPheThr 700
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2070 CATGTAAACGGGATTTGATTATAGAGTCTTGCTTGATGAGGCTTTACA 2119
701 AsnGluLeuValGlnAsnTyrTrpSerLysGlnLysAsnIleLysGlyVa 717
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2120 AATGAACCTTGTCCAAATTAAGAGTATGAGTATGAGGAGTATCAAGGAGT 2169
717 lLysAlaArgPheValValThrAspGlyGlyIleThrArgValTyrProL 734
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2170 GAAAGCACCATTTGTTGCTGACTGATGGTGGGATTAACAGAGTTTATCCCA 2219
734 ySgLuAlaGlyGluAsnTrpGlnGluAsnProGluThrTyrGluAspSer 750
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2220 AGAGGCTGGAGAAATTTGGCAGAAATCCAGAGACATATGAGGACAGC 2269
751 PheTyrLysArgSerLeuAspAsnAsnAsnTyrValPheThrAlaProTy 767
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2270 TTCTATAAAGAGGAGCTAGATAATGATACTATGTTTCACTGCTCCCTA 2319
767 rPheAsnLysSerGlyProGlyAlaTyrGluSerGlyIleMetValSerL 784
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2320 CTTTAAACAAAAGTGGACCTGGTGGCTATGAATCGGGCATTATGGTAAGCA 2369
784 ySAlaValGluIleTyrIleGlnGlyLysLeuLeuLysProAlaValVal 800
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2370 AGCTGTGAAATATATATATCAAGGAAACTTCTTAACCTGCAGTTGTT 2419
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2420 GGAATTAATATGATCTAATCTCGTAGAGATTTCCACCAAAACCTC 2469
817 rIleArgAspProCysAlaGlyProValCysAspCysLysArgAsnSera 834
|||||
2470 AATCAGAGATCCGTGTGCTGGTCCAGTTTGTGACTGCAAAAGAAACAGTG 2519
834 sPValMetAspCysValIleLeuAspAspGlyGlyPheLeuLeuMetAla 850
|||||
2520 ACGTAATGATTTGTGTCATCTGGATGATGGTGGGTTCTCTGATGGCA 2569
851 AsnHisAspAspTyrThrAsnGlnIleGlyArgPhePheGlyGluIleAs 867
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2570 AATCATGATGATTATATACTAATCAGATTTGGAAGATTTTGGAGAGATTGA 2619
867 pProSerLeuMetArgHisLeuValAsnIleSerValTyrAlaPheAsnL 884
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2620 TCCACGCTTGATGAGACACCTGGTTAATATATATCAGTTTATGCTTTTAA 2669
884 ySserTyrAspTyrGlnSerValCysGluProGlyAlaAlaProLysGln 900
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2670 AATCTTATGATTATATCAGTCAGTATGTGACCCGGTGGCTGCACCAAAACA 2719
901 GlyAlaGlyHisArgSerAlaTyrValProSerValAlaAspIleLeuGl 917
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2720 GGAGCAGGACATCGCTCAGCATATGTGCCATCAGTAGCAGACATATTACA 2769
917 nIleGlyTyrTrpAlaThrAlaAlaAlaTrpSerIleLeuGlnGlnPheL 934
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2770 AATTGGCTGGTGGGCCACTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 2819
934 euLeuSerLeuThrPheProArgLeuLeuAlaValGluMetGluAsp 950
|||||
2820 TCTTGAGTTTGACCTTCCACGACATCCCTTGAGCGAGTTGAGATGGAGAT 2869
951 AspAspPheThrAlaSerLeuSerLysGlnSerCysIleThrGluGlnTh 967
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2870 GATGACTTCACGGCCTCCCTGTCCAGCAGAGCTGCATTACTGACACAAAC 2919
967 rGlnTyrPhePheAspAsnAspSerLysSerPheSerGlyValLeuAspC 984
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GenCore version 4.5  
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OM protein - protein search, using sw model

Run on: June 8, 2001, 19:38:04 ; Search time 63.61 Seconds  
(without alignments)  
321.037 Million cell updates/sec

Title: US-09-397-548-17  
Perfect score: 5599  
Sequence: 1 MAAGCLLALTTLFQSLIG.....PDVCFDNNVLEDYTCGGVS 1063

Scoring table:  
Gapop 10.0 , Gapext 0.5

Searched: 185757 seqs, 19210857 residues

Total number of hits satisfying chosen parameters: 185757

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Issued Patents: AA: \*  
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2: /cgn2.6/ptodata/2/iaa/5B\_COMB.pep: \*  
3: /cgn2.6/ptodata/2/iaa/6A\_COMB.pep: \*  
4: /cgn2.6/ptodata/2/iaa/6B\_COMB.pep: \*  
5: /cgn2.6/ptodata/2/iaa/PCTUS\_COMB.pep: \*  
6: /cgn2.6/ptodata/2/iaa/backfiles1.pep: \*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	5599	100.0	1091	1 US-07-745-206A-25	Sequence 25, Appl
2	5599	100.0	1091	1 US-08-455-543A-52	Sequence 52, Appl
3	5599	100.0	1091	2 US-08-223-305C-52	Sequence 52, Appl
4	5599	100.0	1091	2 US-08-311-363-25	Sequence 25, Appl
5	5595	99.9	1091	3 US-08-713-118-4	Sequence 4, Appl
6	5595	99.9	1091	4 US-09-452-007-4	Sequence 4, Appl
7	5559.5	99.3	1086	1 US-08-455-543A-54	Sequence 54, Appl
8	5559.5	99.3	1086	2 US-08-223-305C-54	Sequence 54, Appl
9	5542.5	99.0	1084	1 US-08-455-543A-56	Sequence 56, Appl
10	5542.5	99.0	1084	2 US-08-223-305C-56	Sequence 56, Appl
11	5523	98.6	1103	1 US-08-455-543A-53	Sequence 53, Appl
12	5523	98.6	1103	2 US-08-223-305C-53	Sequence 53, Appl
13	5503	98.3	1079	1 US-08-455-543A-55	Sequence 55, Appl
14	5503	98.3	1079	2 US-08-223-305C-55	Sequence 55, Appl
15	5385.5	96.2	1106	1 US-08-435-675B-5	Sequence 5, Appl
16	5367.5	95.9	1106	1 US-08-336-257A-8	Sequence 8, Appl
17	5134.5	91.7	1086	6 5386025-8	Patent No. 5386025
18	2581.5	46.1	508	1 US-08-435-675B-6	Sequence 6, Appl
19	182	3.3	885	3 US-09-074-579-5	Sequence 5, Appl
20	159.5	2.8	946	3 US-09-074-579-3	Sequence 3, Appl
21	154	2.8	903	1 US-08-021-601-12	Sequence 12, Appl
22	154	2.8	903	1 US-08-082-849B-12	Sequence 12, Appl
23	154	2.8	903	5 PCT-US94-01634-12	Sequence 12, Appl
24	152.5	2.7	789	1 US-08-471-043-32	Sequence 32, Appl
25	152.5	2.7	789	2 US-08-471-044-32	Sequence 32, Appl
26	152.5	2.7	789	2 US-08-463-483A-32	Sequence 32, Appl
27	152.5	2.7	789	2 US-08-471-046A-32	Sequence 32, Appl

28	152.5	2.7	789	2 US-08-470-566B-32	Sequence 32, Appl
29	152.5	2.7	789	2 US-08-838-219B-4	Sequence 4, Appl
30	152.5	2.7	789	2 US-08-469-334-32	Sequence 32, Appl
31	152.5	2.7	789	3 US-09-300-529-32	Sequence 32, Appl
32	152.5	2.7	789	3 US-09-233-336A-4	Sequence 4, Appl
33	152.5	2.7	789	4 US-09-233-336A-4	Sequence 4, Appl
34	150.5	2.7	789	4 US-08-960-780-6	Sequence 6, Appl
35	148.5	2.7	790	4 US-08-960-780-6	Sequence 6, Appl
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37	147.5	2.6	746	3 US-09-233-336A-6	Sequence 6, Appl
38	147.5	2.6	746	4 US-09-233-752A-6	Sequence 8, Appl
39	145.5	2.6	790	4 US-08-960-780-8	Sequence 8, Appl
40	141.5	2.5	789	1 US-08-471-033-29	Sequence 29, Appl
41	141.5	2.5	789	2 US-08-471-044-29	Sequence 29, Appl
42	141.5	2.5	789	2 US-08-463-483A-29	Sequence 29, Appl
43	141.5	2.5	789	2 US-08-471-046A-29	Sequence 29, Appl
44	141.5	2.5	789	2 US-08-470-566B-29	Sequence 29, Appl
45	141.5	2.5	789	2 US-08-838-219B-2	Sequence 2, Appl

ALIGNMENTS

RESULT 1  
US-07-745-206A-25  
; Sequence 25, Application US/07745206A  
; Patent No. 5429921  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: McCue, Ann  
; APPLICANT: Feldman, Daniel  
; TITLE OF INVENTION: Human Calcium Channel Compositions and  
; TITLE OF INVENTION: Methods  
; NUMBER OF SEQUENCES: 32  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Fitch, Even, Tabin & Flannery  
; STREET: 135 S. LaSalle  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: U.S.A.  
; ZIP: 60603  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/07745,206A  
; FILING DATE: 19910815  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Feder, Scott B  
; REFERENCE/DOCKET NUMBER: 51504  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312-372-7842  
; INFORMATION FOR SEQ ID NO: 25:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1091 amino acids  
; TYPE: AMINO ACID  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-07-745-206A-25

Query Match 100.0%; Score 5599; DB 1: Length 1091;  
Best Local Similarity 100.0%; Pred. No. 0;  
Matches 1063; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MAAGCLLALTTLFQSLIGSSSEPPPSAVTTKSWDKMOEDLVTTLAKTASGVNQLVDI 60  
DB 1 MAAGCLLALTTLFQSLIGSSSEPPPSAVTTKSWDKMOEDLVTTLAKTASGVNQLVDI 60

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DB 61 YEKYQDLYTEPNARQOLVEIARDEIKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120  
QY 121 EVVYINAKDDLDPEKNDSEPGSQRIKVFIEDANFGQISYQHAHVHPIPTDIYEGSTIVL 180  
DB 121 EVVYINAKDDLDPEKNDSEPGSQRIKVFIEDANFGQISYQHAHVHPIPTDIYEGSTIVL 180  
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DB 181 NELNWTSALEVEFKKNEEDPSLLQWVFGSATGLARYYPASPWVDNSRTNPKIDLYDVR 240  
QY 241 RPWTIOGAASPDKMLIYDVSGSGVTLKIRTSVSEMLETISDDDFVNVASFNSNAQD 300  
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DB 301 VSCFOHLVQANVRNKKVYLDVANNITAKGTDYKKGFSFAFEQOLLNVNVRANCNKIIML 360  
QY 361 FTGGEERAQOEIENKYNKDKKRVFRFVSQGHNYVERGPIQWACENKGYIYEIPSGAIR 420  
DB 361 FTGGEERAQOEIENKYNKDKKRVFRFVSQGHNYVERGPIQWACENKGYIYEIPSGAIR 420  
QY 421 INTQEYLDVLRPNVLAGDKAKQVQWNTNVDLDELGLVITGLPVENITQGFENKTNLK 480  
DB 421 INTQEYLDVLRPNVLAGDKAKQVQWNTNVDLDELGLVITGLPVENITQGFENKTNLK 480  
QY 481 NOLLGVMGVDVLESDIKRTPRTCLPNCYPAIDPNGVYLLHPNLPKNPKSQEPVTL 540  
DB 481 NOLLGVMGVDVLESDIKRTPRTCLPNCYPAIDPNGVYLLHPNLPKNPKSQEPVTL 540  
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QY 601 ALVLPYTSFYIYKAKLEETITQARSKKGMKDSITLKPDPNFESGYTFIAPRDYCNDLKI 660  
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QY 721 FVVTDDGTRVYKPEAGENQENPETEYDSFYKSLDNDNYFTAPYFNKSGPGAYESGI 780  
DB 721 FVVTDDGTRVYKPEAGENQENPETEYDSFYKSLDNDNYFTAPYFNKSGPGAYESGI 780  
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QY 841 LDDGFFLLMAHDDYTNQIGRFFGEIDPSLMRHLVNTSVYAFNKSQYQSVCEPGAAPKQ 900  
DB 841 LDDGFFLLMAHDDYTNQIGRFFGEIDPSLMRHLVNTSVYAFNKSQYQSVCEPGAAPKQ 900  
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DB 901 GAGHSRAYSVPADILQIGWATAAASIIQQFLLSLTFPRLEAVEMEDDDFTASLSKQ 960  
QY 961 SCITEQTYQFFDNDKSGFSGVLDGCGNSRIFPHGKLMNTNLIIFIMVESKGTCPDTRLLI 1020  
DB 961 SCITEQTYQFFDNDKSGFSGVLDGCGNSRIFPHGKLMNTNLIIFIMVESKGTCPDTRLLI 1020  
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DB 1021 QAEQTSQGNPCDMVQKPRYKRGDVCFDNNVLDYTDCCGVS 1063

RESULT 2

US-08-455-543A-52

; Sequence 52, Application US/08455543A

Patent No. 5792846  
GENERAL INFORMATION:  
APPLICANT: Harpold, Michael  
APPLICANT: Ellis, Steven  
APPLICANT: Williams, Mark  
APPLICANT: Feldman, Daniel  
APPLICANT: McCue, Ann  
APPLICANT: Brenner, Robert  
TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND METHODS  
NUMBER OF SEQUENCES: 57  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Brown, Martin, Haller & McClain  
STREET: 1660 Union Street  
CITY: San Diego  
STATE: California  
COUNTRY: USA  
ZIP: 92101-2926  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/455,543A  
FILING DATE: May 31, 1995  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/223,305  
FILING DATE: April 4, 1994  
APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 6362-52517  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 52:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1091 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
US-08-455-543A-52

Query Match 100.0%; Score 5599; DB 1; Length 1091;  
Best Local Similarity 100.0%; Pred. No. 0;  
Matches 1063; Conservative 0; Mismatches 0; Indels 0; Caps 0;

QY 1 MAGCLLALTLFQSLIGPSSEEPFSAVTKSWDKMQEDLVTLAKTASGVNQLVDI 60

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QY 121 EYVYNAKDDLDPEKNDSEPSQRIKPVFIEDANFGROISYOHAAVHIPTDIYEGSTIVL 180  
DB 121 EYVYNAKDDLDPEKNDSEPSQRIKPVFIEDANFGROISYOHAAVHIPTDIYEGSTIVL 180  
QY 181 NELNWTLSALDEVFKKNREDEPSLLHQVGSATGLARYYPASFWVDSNRTPNKIDLYDYRR 240  
DB 181 NELNWTLSALDEVFKKNREDEPSLLHQVGSATGLARYYPASFWVDSNRTPNKIDLYDYRR 240  
QY 241 RPWYTOGAASPKDMLILVDVSGSVSGLTKLRTSVSEMLETSLDDFVNVASFNSNAQD 300  
DB 241 RPWYTOGAASPKDMLILVDVSGSVSGLTKLRTSVSEMLETSLDDFVNVASFNSNAQD 300  
QY 301 VSCFQHLVQVANNRKNVYLKDAVNNTAKGIDYKKGFSFAFEPQLLNVNVRANCKNIIML 360  
DB 301 VSCFQHLVQVANNRKNVYLKDAVNNTAKGIDYKKGFSFAFEPQLLNVNVRANCKNIIML 360  
QY 361 FTDGGEERAQEIFNKYNDKKVYRFRFSVQGHNYERGPQWACENKGYIYEIPSIGAIR 420  
DB 361 FTDGGEERAQEIFNKYNDKKVYRFRFSVQGHNYERGPQWACENKGYIYEIPSIGAIR 420  
QY 421 INTQSYLDVLRPMVLGDKAKOVQWNTVYLDALGLVITGTLVPFNITGTFENKTNLK 480  
DB 421 INTQSYLDVLRPMVLGDKAKOVQWNTVYLDALGLVITGTLVPFNITGTFENKTNLK 480  
QY 481 NQLILGVMGVDVSLDIKRLTPRETLCPNGYFAIDPNGYVLLHPNLQPKPKSQEPVTL 540  
DB 481 NQLILGVMGVDVSLDIKRLTPRETLCPNGYFAIDPNGYVLLHPNLQPKPKSQEPVTL 540  
QY 541 DFLDAELNDIKVEIRNKMIDGSEKFTRLVKQSDERYIDKGNRTYTWTVPVNGTDSL 600  
DB 541 DFLDAELNDIKVEIRNKMIDGSEKFTRLVKQSDERYIDKGNRTYTWTVPVNGTDSL 600  
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DB 601 ALVLPYTFYIYKAKLEETITQARKKGMKDSLETKPDNFEEGYTFTAPRDYCNLDKI 660  
QY 661 SONTEFLNFNEFIDRTPNPNPCNADLINRVLLDAGFTNELVQVNSKQKNIKGVKAR 720  
DB 661 SONTEFLNFNEFIDRTPNPNPCNADLINRVLLDAGFTNELVQVNSKQKNIKGVKAR 720  
QY 721 FVVTGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
DB 721 FVVTGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
QY 781 MYSKAVEIYIQGLKLPKPAVVGKIDVNSWIENTKTSTRDPCAGVPCDKRNSDVMDCVI 840  
DB 781 MYSKAVEIYIQGLKLPKPAVVGKIDVNSWIENTKTSTRDPCAGVPCDKRNSDVMDCVI 840  
QY 841 LDGGFLMANHDDYNTQIGRFFGIDPSLMRHLNYSVYAFNKSIDYQSVCEPGAAPKQ 900  
DB 841 LDGGFLMANHDDYNTQIGRFFGIDPSLMRHLNYSVYAFNKSIDYQSVCEPGAAPKQ 900  
QY 901 GAGHSAYVPSVADILQIGWATAAWSILOQFLSLFPPRLLEAVEMEDDDFTASLSKQ 960  
DB 901 GAGHSAYVPSVADILQIGWATAAWSILOQFLSLFPPRLLEAVEMEDDDFTASLSKQ 960  
QY 961 SCITETQYFFNDNDSKSGVLDGNCNCRIFHGEKLMNTNLFIMVESKGTCPDTRLLI 1020  
DB 961 SCITETQYFFNDNDSKSGVLDGNCNCRIFHGEKLMNTNLFIMVESKGTCPDTRLLI 1020  
QY 1021 QAEQTSDEGNPCDMVKQPRYKGPVDCFDNNVLEDYDCGGVS 1063  
DB 1021 QAEQTSDEGNPCDMVKQPRYKGPVDCFDNNVLEDYDCGGVS 1063

RESULT 3

US-08-223-305C-52  
; Sequence 52, Application US/08223305C  
; Patent No. 5851824  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FastSeq Version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/223,305C  
; FILING DATE: April 4, 1994  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/868,354  
; FILING DATE: April 10, 1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/620,250  
; FILING DATE: 30-NOV-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/482,384  
; FILING DATE: 20-FEB-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/US89/01408  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/176,899  
; FILING DATE: 04-APR-1988  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 52516 (P519739)  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 52:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1091 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FRAGMENT TYPE: internal  
; US-08-223-305C-52

Query Match 100.0%; Score 5599; DB 2; Length 1091;  
Best Local Similarity 100.0%; Pred. No. 0;  
Matches 1063; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MAAGCLLALTTLFQSLIGSPSEPPFSAVTKSWDKMQEDLVTLAKTAGVNLQYDI 60  
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Db 1 MAAGCLLALTTLTFSLLIGPSSEPPPSAVTIKSWVDKMQEDLVTLAKTAGSVNQLVDI 60
QY 61 YEKYQDLYTVEPNNAQOLVEIARDEKLLSNRSKALVSALAEKVAQAAHQWREDFASN 120
Db 61 YEKYQDLYTVEPNNAQOLVEIARDEKLLSNRSKALVSALAEKVAQAAHQWREDFASN 120
QY 121 EVVYNKADLDPEKNDSEPGSQRIKPVFIEDANFGQISYQAAHVIPTDIYEGSTIVL 180
Db 121 EVVYNKADLDPEKNDSEPGSQRIKPVFIEDANFGQISYQAAHVIPTDIYEGSTIVL 180
QY 181 NELNWTALDEVEFKKREDEPSSLQVFGSATGLARYYPASPVWDNSRTNPKIDLYDVR 240
Db 181 NELNWTALDEVEFKKREDEPSSLQVFGSATGLARYYPASPVWDNSRTNPKIDLYDVR 240
QY 241 RPWYIOGAASPDKMLILVDVSGVSGLTLLKIRTSVSEMLETSLDDDFVNVASFNSNAQD 300
Db 241 RPWYIOGAASPDKMLILVDVSGVSGLTLLKIRTSVSEMLETSLDDDFVNVASFNSNAQD 300
QY 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGITYDKGFSFAFEQLLNYSRANCNKIIML 360
Db 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGITYDKGFSFAFEQLLNYSRANCNKIIML 360
QY 361 FTDCGGERAEQIEFNKYNKDKKVRFRFVSGQHNYERGPIQMACENKGYIYEIPSGAIR 420
Db 361 FTDCGGERAEQIEFNKYNKDKKVRFRFVSGQHNYERGPIQMACENKGYIYEIPSGAIR 420
QY 421 INTQEYLDVLGRPMVLADKAKOVQNTNVYLDALGLVITGTLPVFNITGQENKTNLK 480
Db 421 INTQEYLDVLGRPMVLADKAKOVQNTNVYLDALGLVITGTLPVFNITGQENKTNLK 480
QY 481 NQILGVMGVDSLEDIKRLTPFTLCPNGYIYFAIDPNGYVLLHPNLQPNKPSQEPVTL 540
Db 481 NQILGVMGVDSLEDIKRLTPFTLCPNGYIYFAIDPNGYVLLHPNLQPNKPSQEPVTL 540
QY 541 DFLDAELENDIKVEIRNKMIDGSGEKTFTLVKSQDERVIDKGNRTYTTPVNGTDYSL 600
Db 541 DFLDAELENDIKVEIRNKMIDGSGEKTFTLVKSQDERVIDKGNRTYTTPVNGTDYSL 600
QY 601 ALVLPYTSFYIIKAKLEETITQARSKGKMKDSETLKPDNFEESGYTFIAPRYCNDLKI 660
Db 601 ALVLPYTSFYIIKAKLEETITQARSKGKMKDSETLKPDNFEESGYTFIAPRYCNDLKI 660
QY 661 SDNTEFLNFEFIDRKTPNPNPSCNADLNRLVLLDAGFTNELVQYWSKQKNIKGVKAR 720
Db 661 SDNTEFLNFEFIDRKTPNPNPSCNADLNRLVLLDAGFTNELVQYWSKQKNIKGVKAR 720
QY 721 FVYTDGGITRYPKEAGENQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
Db 721 FVYTDGGITRYPKEAGENQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780
QY 781 MVSQAVEIYIOGKLLPAPVGVGIKIDVNSWLENFTKTSIRDPACAGPCVDCRNSDVMDCVI 840
Db 781 MVSQAVEIYIOGKLLPAPVGVGIKIDVNSWLENFTKTSIRDPACAGPCVDCRNSDVMDCVI 840
QY 841 LDDGGFLMANHDDYTNQIGRFFGEIDPSLMRHLVNI SVYAFNKSVDYQSVCEPAGAPKQ 900
Db 841 LDDGGFLMANHDDYTNQIGRFFGEIDPSLMRHLVNI SVYAFNKSVDYQSVCEPAGAPKQ 900
QY 901 GAGHRSAYVPSVADILQIGWATAAWSILQOFLSLTTPRLLLEAVEMEDDDFTASLSKQ 960
Db 901 GAGHRSAYVPSVADILQIGWATAAWSILQOFLSLTTPRLLLEAVEMEDDDFTASLSKQ 960
QY 961 SCTEOTOYFEDNDKSFSGVLDCGNCSTRIFHGEKLMNTNLIIFIMVESKGTCPCDTRLLI 1020
Db 961 SCTEOTOYFEDNDKSFSGVLDCGNCSTRIFHGEKLMNTNLIIFIMVESKGTCPCDTRLLI 1020
QY 1021 QAEQTSQGNPCDMVQPRYKGPVDFCNVLEDYTDGCVS 1063
Db 1021 QAEQTSQGNPCDMVQPRYKGPVDFCNVLEDYTDGCVS 1063
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RESULT 4

US-08-311-363-25

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; Sequence 25, Application US/08311363
; Patent No. 5876958
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: Feldman, Daniel
; APPLICANT: McCue, Ann
; APPLICANT: Brenner, Robert
; TITLE OF INVENTION: Human Calcium Channel Compositions and
; TITLE OF INVENTION: Methods
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Brown, Martin, Haller & McClain
; STREET: 1660 Union Street
; CITY: San Diego
; STATE: California
; COUNTRY: USA
; ZIP: 92101-2926
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/311,363
; FILING DATE:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/745,206
; FILING DATE: 15-AUG-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Seidman, Stephanie L.
; REGISTRATION NUMBER: 33,779
; REFERENCE/DOCKET NUMBER: 6362-51506
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619)238-0999
; TELEFAX: (619)238-0062
; INFORMATION FOR SEQ ID NO: 25:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1091 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-311-363-25
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Query Match 100.0%; Score 5599; DB 2; Length 1091;  
Best Local Similarity 100.0%; Pred. No. 0;  
Matches 1063; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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QY 1 MAAGCLLALTTLTFSLLIGPSSEPPPSAVTIKSWVDKMQEDLVTLAKTAGSVNQLVDI 60
Db 1 MAAGCLLALTTLTFSLLIGPSSEPPPSAVTIKSWVDKMQEDLVTLAKTAGSVNQLVDI 60
QY 61 YEKYQDLYTVEPNNAQOLVEIARDEKLLSNRSKALVSALAEKVAQAAHQWREDFASN 120
Db 61 YEKYQDLYTVEPNNAQOLVEIARDEKLLSNRSKALVSALAEKVAQAAHQWREDFASN 120
QY 121 EVVYNKADLDPEKNDSEPGSQRIKPVFIEDANFGQISYQAAHVIPTDIYEGSTIVL 180
Db 121 EVVYNKADLDPEKNDSEPGSQRIKPVFIEDANFGQISYQAAHVIPTDIYEGSTIVL 180
QY 181 NELNWTALDEVEFKKREDEPSSLQVFGSATGLARYYPASPVWDNSRTNPKIDLYDVR 240
Db 181 NELNWTALDEVEFKKREDEPSSLQVFGSATGLARYYPASPVWDNSRTNPKIDLYDVR 240
QY 241 RPWYIOGAASPDKMLILVDVSGVSGLTLLKIRTSVSEMLETSLDDDFVNVASFNSNAQD 300
Db 241 RPWYIOGAASPDKMLILVDVSGVSGLTLLKIRTSVSEMLETSLDDDFVNVASFNSNAQD 300
QY 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGITYDKGFSFAFEQLLNYSRANCNKIIML 360
Db 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGITYDKGFSFAFEQLLNYSRANCNKIIML 360
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Db 721 FVTDGGITRVYPKEAGNWNQENPETYEDSFYKRSLDNDNYYFTAPYFNKSGPGAYESGI 780
QY 781 MYSKAVEIYIQGKLLKPAVVGKIDVNSWIENTFTKTSIRDPGAGPVCDCKRNSDVMDCVI 840
Db 781 MYSKAVEIYIQGKLLKPAVVGKIDVNSWIENTFTKTSIRDPGAGPVCDCKRNSDVMDCVI 840
QY 841 LDDGGFLMANHDDYTNOIGREFGEIDPSLMRHLNYSVYAFNKSVDYQSVCEPGAAPKQ 900
Db 841 LDDGGFLMANHDDYTNOIGREFGEIDPSLMRHLNYSVYAFNKSVDYQSVCEPGAAPKQ 900
QY 901 GAGHSAYVPSVADILQIGWATAAASWILQOFLLSLTTPRLLLEAVEMEDDDFTASLSKQ 960
Db 901 GAGHSAYVPSVADILQIGWATAAASWILQOFLLSLTTPRLLLEAVEMEDDDFTASLSKQ 960
QY 961 SCITEQTOYFFDNDKSFSGVLDGCGNCSRFHGEKLMNTNLIIFIMVESKGTCPDTRLLI 1020
Db 961 SCITEQTOYFFDNDKSFSGVLDGCGNCSRFHGEKLMNTNLIIFIMVESKGTCPDTRLLI 1020
QY 1021 QAEQTSDBGPNCDMWKQPRYKGPDPVCFDNNVLEDYTDGCGVYS 1063
Db 1021 QAEQTSDBGPNCDMWKQPRYKGPDPVCFDNNVLEDYTDGCGVYS 1063

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## RESULT 6

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US-09-452-007-4
; Sequence 4, Application US/09452007
; Patent No. 6140485
; GENERAL INFORMATION:
; APPLICANT: Franco, Rodrigo
; APPLICANT: Sun Chen, Ai Ju
; APPLICANT: Suey, David J.
; TITLE OF INVENTION: NUCLEIC ACID ENCODING HUMAN NEURONAL
; TITLE OF INVENTION: CALCIUM CHANNEL SUBUNITS
; NUMBER OF SEQUENCES: 6
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
; STREET: Two Militia Drive
; CITY: Lexington
; STATE: MA
; COUNTRY: USA
; ZIP: 02173-4799
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/452,007
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/713,118
; FILING DATE: 16-SEP-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Mata, Elizabeth W.
; REGISTRATION NUMBER: 38,236
; REFERENCE/DOCKET NUMBER: ACC96-01
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-861-6240
; TELEFAX: 617-861-9540
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1091 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-452-007-4

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Query Match          99.9%; Score 5595; DB 4; Length 1091;
Best Local Similarity 99.9%; Pred. No. 0;
Matches 1062; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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QY 1 MAAGCLLALTTLTFLSLLIGPSSSEPPFPSSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
Db 1 MAAGCLLALTTLTFLSLLIGPSSSEPPFPSSAVTIKSWVDKMQEDLVTLAKTASGVNQLVDI 60
QY 61 YEKYQDLTYTVEPNNAQRLVEIAAROIIEKLLSNRSKALVSALAEAEKVQAAHOREDFASN 120
Db 61 YEKYQDLTYTVEPNNAQRLVEIAAROIIEKLLSNRSKALVSALAEAEKVQAAHOREDFASN 120
QY 121 EYVYNAKDDLDPEKNDSEPGSORIKPVFIEDANFQRIQSYQHAAVHIPTDIYEGSTIVL 180
Db 121 EYVYNAKDDLDPEKNDSEPGSORIKPVFIEDANFQRIQSYQHAAVHIPTDIYEGSTIVL 180
QY 181 NELNMTSALDEYFKKNREEDPSLLMQVFGSATGLARIYPASPWVDNSRTPNKIDLDYDVR 240
Db 181 NELNMTSALDEYFKKNREEDPSLLMQVFGSATGLARIYPASPWVDNSRTPNKIDLDYDVR 240
QY 241 RPWYTOGAASPKDMLILVDVSGVSGSLTLKLTSTVSEMLETSLDDDFVNVASFNSNAQD 300
Db 241 RPWYTOGAASPKDMLILVDVSGVSGSLTLKLTSTVSEMLETSLDDDFVNVASFNSNAQD 300
QY 301 VSCFOHLVQANVRNKKVLKDAVNNTAKGIDYKKGFSFAFQOLLNYSRANCNKIIML 360
Db 301 VSCFOHLVQANVRNKKVLKDAVNNTAKGIDYKKGFSFAFQOLLNYSRANCNKIIML 360
QY 361 FTDGGEERAQEIFNKYNKDKKVRFRFSVQHNRYERGIQWMACENKGYEYIPIPSIGAIR 420
Db 361 FTDGGEERAQEIFNKYNKDKKVRFRFSVQHNRYERGIQWMACENKGYEYIPIPSIGAIR 420
QY 421 INTQEYLDVLGRPMVLGAKAKOVQNTVYLDALGLVITGTLPVFNITGQFENKTNLK 480
Db 421 INTQEYLDVLGRPMVLGAKAKOVQNTVYLDALGLVITGTLPVFNITGQFENKTNLK 480
QY 481 NQLILGVMGVDVSLIEDIKLRTPLFCPNGYFAIDPNGYVLLHPNLQPKPKSQBPVTL 540
Db 481 NQLILGVMGVDVSLIEDIKLRTPLFCPNGYFAIDPNGYVLLHPNLQPKPKSQBPVTL 540
QY 541 DFDAELENDIKVEIRNKMIDGESGEKTRTLVKOSODERYIDKGNRTYTTWTPVNGTDYSL 600
Db 541 DFDAELENDIKVEIRNKMIDGESGEKTRTLVKOSODERYIDKGNRTYTTWTPVNGTDYSL 600
QY 601 ALVLPITYFYIYKAKLEETITQARSKKGMKDSKSETLKPONFEESGYTFTAPRDYCNLDKI 660
Db 601 ALVLPITYFYIYKAKLEETITQARSKKGMKDSKSETLKPONFEESGYTFTAPRDYCNLDKI 660
QY 661 SDNNTFEFLNFEFIDRKTTPNPNPCNADLINRVLLDAGFTNELVQVYWSKQKNIKGVKAR 720
Db 661 SDNNTFEFLNFEFIDRKTTPNPNPCNADLINRVLLDAGFTNELVQVYWSKQKNIKGVKAR 720
QY 721 FVTDGGITRVYPKEAGNWNQENPETYEDSFYKRSLDNDNYYFTAPYFNKSGPGAYESGI 780
Db 721 FVTDGGITRVYPKEAGNWNQENPETYEDSFYKRSLDNDNYYFTAPYFNKSGPGAYESGI 780
QY 781 MYSKAVEIYIQGKLLKPAVVGKIDVNSWIENTFTKTSIRDPGAGPVCDCKRNSDVMDCVI 840
Db 781 MYSKAVEIYIQGKLLKPAVVGKIDVNSWIENTFTKTSIRDPGAGPVCDCKRNSDVMDCVI 840
QY 841 LDDGGFLMANHDDYTNOIGREFGEIDPSLMRHLNYSVYAFNKSVDYQSVCEPGAAPKQ 900
Db 841 LDDGGFLMANHDDYTNOIGREFGEIDPSLMRHLNYSVYAFNKSVDYQSVCEPGAAPKQ 900
QY 901 GAGHSAYVPSVADILQIGWATAAASWILQOFLLSLTTPRLLLEAVEMEDDDFTASLSKQ 960
Db 901 GAGHSAYVPSVADILQIGWATAAASWILQOFLLSLTTPRLLLEAVEMEDDDFTASLSKQ 960
QY 961 SCITEQTOYFFDNDKSFSGVLDGCGNCSRFHGEKLMNTNLIIFIMVESKGTCPDTRLLI 1020
Db 961 SCITEQTOYFFDNDKSFSGVLDGCGNCSRFHGEKLMNTNLIIFIMVESKGTCPDTRLLI 1020
QY 1021 QAEQTSDBGPNCDMWKQPRYKGPDPVCFDNNVLEDYTDGCGVYS 1063
Db 1021 QAEQTSDBGPNCDMWKQPRYKGPDPVCFDNNVLEDYTDGCGVYS 1063

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RESULT 7  
US-08-455-543A-54  
; Sequence 54, Application US/0845543A  
; Patent No. 5792846  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FastSeq version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/455,543A  
; FILING DATE: May 31, 1995  
; PRIORITY APPLICATION DATA:  
; APPLICATION NUMBER: 08/223,305  
; FILING DATE: April 4, 1994  
; PRIORITY APPLICATION DATA:  
; APPLICATION NUMBER: 07/868,354  
; FILING DATE: April 10, 1992  
; PRIORITY APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; PRIORITY APPLICATION DATA:  
; APPLICATION NUMBER: US 07/620,250  
; FILING DATE: 30-NOV-1990  
; PRIORITY APPLICATION DATA:  
; APPLICATION NUMBER: US 07/482,384  
; FILING DATE: 20-FEB-1990  
; PRIORITY APPLICATION DATA:  
; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 04-APR-1989  
; PRIORITY APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/US89/01408  
; FILING DATE: 04-APR-1989  
; PRIORITY APPLICATION DATA:  
; APPLICATION NUMBER: US 07/176,899  
; FILING DATE: 04-APR-1988  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 6362-52517  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 54:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1086 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FRAGMENT TYPE: internal  
US-08-455-543A-54

Query Match 99.3%; Score 5559.5; DB 1; Length 1086;

Best Local Similarity 99.5%; Pred. No. 0;  
Matches 1058; Conservative 0; Mismatches 0; Indels 5; Gaps 1;  
QY 1 MAAGCULALTTLTFLQSLLIGPSSSEPPPSAVTIKSWDKMQEDLVTLAKTASGVNQLVDI 60  
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Db 61 YEKYQDLYTVEPNNAQQLVEIAARDIEKLLSNRSKALVSLALEAEKVAQAAHOREDFASN 120  
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QY 241 RPWYIQAASPKDMLILVDVSGVSGTLTKLINTSVSEMLETSLDSDDFNVASFNSNAQD 300  
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Db 241 RPWYIQAASPKDMLILVDVSGVSGTLTKLINTSVSEMLETSLDSDDFNVASFNSNAQD 300  
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QY 301 VSCFQHLVQANVRNKKVLDVANNITAKGIDYKKGFSAFEQLLNNVSRANCKIIML 360  
|||||  
Db 301 VSCFQHLVQANVRNKKVLDVANNITAKGIDYKKGFSAFEQLLNNVSRANCKIIML 360  
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QY 361 FTDGGEERAQEIFNKYKDKKVRFRFSYGOHNYERGPQWMACENKGYIYEIPSGAIR 420  
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Db 361 FTDGGEERAQEIFNKYKDKKVRFRFSYGOHNYERGPQWMACENKGYIYEIPSGAIR 420  
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QY 421 INTQEYLDVLRPMVLGAKQVQWNTVYLDALGLVITGTLVPVFNITGQFENKTNLK 480  
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Db 421 INTQEYLDVLRPMVLGAKQVQWNTVYLDALGLVITGTLVPVFNITGQFENKTNLK 480  
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QY 481 NQLILGVMGVDVSLEDIKRLTPRFLCPNGYFPAIDPNGYVLLHPLNLPKNKSPQEVTL 540  
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Db 481 NQLILGVMGVDVSLEDIKRLTPRFLCPNGYFPAIDPNGYVLLHPLNLPKNKSPQEVTL 540  
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QY 541 DFLDALENDIKVEIRNKMIDGESGKFTLTKVKSODERYIDKGNRTYTWTPVNGTDYSL 600  
|||||  
Db 536 DFLDALENDIKVEIRNKMIDGESGKFTLTKVKSODERYIDKGNRTYTWTPVNGTDYSL 595  
|||||  
QY 601 ALVLPITYSYIYKAKLEETITQARSKKGMKDSKSETLKPDPNFESGYTFTIAPRDYCNLDKI 660  
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Db 596 ALVLPITYSYIYKAKLEETITQARSKKGMKDSKSETLKPDPNFESGYTFTIAPRDYCNLDKI 655  
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QY 661 SDNTEFLNLFNEFIDRKTNNPNSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 720  
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Db 656 SDNTEFLNLFNEFIDRKTNNPNSCNADLINRVLLDAGFTNELVQNYWSKQKNIKGVKAR 715  
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Db 716 FVYTDGGITRVYPKEAGENQENPETYEDSFYKRSIDNDNYVFTAPYFNKSGPGAYESGI 775  
|||||  
QY 781 MYSKAVEIYIOGKLLKPAVYGIKIDVNSWIENFTKTSIRDPCAGPYCDCKRNSDVMDCVI 840  
|||||  
Db 776 MYSKAVEIYIOGKLLKPAVYGIKIDVNSWIENFTKTSIRDPCAGPYCDCKRNSDVMDCVI 835  
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QY 841 LDDGGFLLMANHDDYTNQIGRFGEIDPSLMRHLVNI SVYAFNKSIDYDQSVCEPFGAPKQ 900  
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Db 836 LDDGGFLLMANHDDYTNQIGRFGEIDPSLMRHLVNI SVYAFNKSIDYDQSVCEPFGAPKQ 895  
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QY 901 GAGHRSAYVPSVADILQIGWATAAASIIQQFLLSLTTPRLLEAVEMEDDDFTASLSKQ 960  
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Db 896 GAGHRSAYVPSVADILQIGWATAAASIIQQFLLSLTTPRLLEAVEMEDDDFTASLSKQ 955  
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QY 961 SCITEQTYFFDNDKSKFSGLDCGNCRIHFGEKLMNTNLIFIMVESKGTCPDCTRLLI 1020  
|||||  
Db 956 SCITEQTYFFDNDKSKFSGLDCGNCRIHFGEKLMNTNLIFIMVESKGTCPDCTRLLI 1015  
|||||  
QY 1021 QAEQTSDDGNPCDMVKQPRYKGPDPVCFNNVLEDTYDCGGVS 1063  
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Db 1016 QAEQTS DGNPCDMVKQPRYRKGPDPVCFDNNVLEDYTDCCGVS 1058

RESULT  
US-08-223-305C-54  
; Sequence 54, Application US/08223305C  
; Patent No. 5851824  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; NUMBER OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FASTSEQ Version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/223,305C  
; FILING DATE: April 4, 1994  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/868,354  
; FILING DATE: April 10, 1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/620,250  
; FILING DATE: 30-NOV-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/482,384  
; FILING DATE: 20-FEB-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/US89/01408  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/176,899  
; FILING DATE: 04-APR-1988  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 52516 (P519739)  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 54:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1086 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FRAGMENT TYPE: internal  
US-08-223-305C-54

Query Match 99.3%; Score 5559.5; DB 2; Length 1086;  
Best Local Similarity 99.5%; Pred. No. 0;

Matches 1058; Conservative 0; Mismatches 0; Indels 5; Gaps 1;  
QY 1 MAACLLALTLTLFQSLIGPSSSEPPSAVTIKSWDKMQEDLVTLAKTAGVNLQYDI 60  
DB 1 MAACLLALTLTLFQSLIGPSSSEPPSAVTIKSWDKMQEDLVTLAKTAGVNLQYDI 60  
QY 61 YEKYODLYTVEPNNAQOLVEIAARDIEKLLSNRSKALVSLALEAEKQAAHQWREDFASN 120  
DB 61 YEKYODLYTVEPNNAQOLVEIAARDIEKLLSNRSKALVSLALEAEKQAAHQWREDFASN 120  
QY 121 EYVYNKADLDLPEKNDSEPGSQRIKPVFIEDANFGQISYQHAHVHIPTDIYEGSTIVL 180  
DB 121 EYVYNKADLDLPEKNDSEPGSQRIKPVFIEDANFGQISYQHAHVHIPTDIYEGSTIVL 180  
QY 181 NELNWTSALEDEVFKKNEEDPSLLQVFGSATGLARYYPASPDVNSRTPNKIDLYDVR 240  
DB 181 NELNWTSALEDEVFKKNEEDPSLLQVFGSATGLARYYPASPDVNSRTPNKIDLYDVR 240  
QY 241 RPWYIOGAASPKDMLILVDVSGVSGLTLLKIRTSVSEMLETLSDDDFVNVASFNSNAQD 300  
DB 241 RPWYIOGAASPKDMLILVDVSGVSGLTLLKIRTSVSEMLETLSDDDFVNVASFNSNAQD 300  
QY 301 VSCFOHLVQANVRNKKVLDVANNITAKGIDYKKGFSFAPEQLLNINVRANCKIIML 360  
DB 301 VSCFOHLVQANVRNKKVLDVANNITAKGIDYKKGFSFAPEQLLNINVRANCKIIML 360  
QY 361 FTGGEERAQEIENKYNKDKKRVFRFSVGOHNYERGIOWMACENKGYIYIPIGAIR 420  
DB 361 FTGGEERAQEIENKYNKDKKRVFRFSVGOHNYERGIOWMACENKGYIYIPIGAIR 420  
QY 421 INTQEYLDVLRPMVLADGAKQVQWNTNVLDALEGLVITGLTPVFNITGQFENKTNLK 480  
DB 421 INTQEYLDVLRPMVLADGAKQVQWNTNVLDALEGLVITGLTPVFNITGQFENKTNLK 480  
QY 481 NQLILGVMGVDVSLIEDIKRLTPRETCPCNGYIFAIDNGVLLHPNLPKPKSQEPVTL 540  
DB 481 NQLILGVMGVDVSLIEDIKRLTPRETCPCNGYIFAIDNGVLLHPNLPKPKSQEPVTL 540  
QY 541 DFLDAELENDIKVEIRKMKIDGESGKTFRTLVKSQDERYIDKGNRTYTTWTPVNGTDYSL 600  
DB 541 DFLDAELENDIKVEIRKMKIDGESGKTFRTLVKSQDERYIDKGNRTYTTWTPVNGTDYSL 600  
QY 595 DFLDAELENDIKVEIRKMKIDGESGKTFRTLVKSQDERYIDKGNRTYTTWTPVNGTDYSL 595  
DB 595 DFLDAELENDIKVEIRKMKIDGESGKTFRTLVKSQDERYIDKGNRTYTTWTPVNGTDYSL 595  
QY 601 ALVLPYSFYIYIAKLEETITQARSKGKMKDSETLKPDPNFESEGYTFIAPRDYCNDLKI 660  
DB 601 ALVLPYSFYIYIAKLEETITQARSKGKMKDSETLKPDPNFESEGYTFIAPRDYCNDLKI 660  
QY 655 ALVLPYSFYIYIAKLEETITQARSKGKMKDSETLKPDPNFESEGYTFIAPRDYCNDLKI 655  
DB 655 ALVLPYSFYIYIAKLEETITQARSKGKMKDSETLKPDPNFESEGYTFIAPRDYCNDLKI 655  
QY 720 SDNTEFLNFEFIDRKTPNPNPCNADLNRLVLDAGFTNELVQNYWSKQKNIKGVKAR 720  
DB 720 SDNTEFLNFEFIDRKTPNPNPCNADLNRLVLDAGFTNELVQNYWSKQKNIKGVKAR 720  
QY 715 SDNTEFLNFEFIDRKTPNPNPCNADLNRLVLDAGFTNELVQNYWSKQKNIKGVKAR 715  
DB 715 SDNTEFLNFEFIDRKTPNPNPCNADLNRLVLDAGFTNELVQNYWSKQKNIKGVKAR 715  
QY 780 FVYTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGGAYESGI 780  
DB 780 FVYTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGGAYESGI 780  
QY 775 FVYTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGGAYESGI 775  
DB 775 FVYTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGGAYESGI 775  
QY 840 MYSKAVEIYIOGKLLPAPVVGIIKIDVNSWIENFTKTSIRPOCAGPVCDCRNSDVMDCVI 840  
DB 840 MYSKAVEIYIOGKLLPAPVVGIIKIDVNSWIENFTKTSIRPOCAGPVCDCRNSDVMDCVI 840  
QY 835 MYSKAVEIYIOGKLLPAPVVGIIKIDVNSWIENFTKTSIRPOCAGPVCDCRNSDVMDCVI 835  
DB 835 MYSKAVEIYIOGKLLPAPVVGIIKIDVNSWIENFTKTSIRPOCAGPVCDCRNSDVMDCVI 835  
QY 900 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNSVYAFNKSVDYQSVCPGPAAPKQ 900  
DB 900 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNSVYAFNKSVDYQSVCPGPAAPKQ 900  
QY 895 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNSVYAFNKSVDYQSVCPGPAAPKQ 895  
DB 895 LDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNSVYAFNKSVDYQSVCPGPAAPKQ 895  
QY 960 GAGHSAYVPSVADILQIGWATAAAWSILQQLLSITFPRLLEAVEMEDDDFTASLSKQ 960  
DB 960 GAGHSAYVPSVADILQIGWATAAAWSILQQLLSITFPRLLEAVEMEDDDFTASLSKQ 960  
QY 955 GAGHSAYVPSVADILQIGWATAAAWSILQQLLSITFPRLLEAVEMEDDDFTASLSKQ 955  
DB 955 GAGHSAYVPSVADILQIGWATAAAWSILQQLLSITFPRLLEAVEMEDDDFTASLSKQ 955  
QY 1020 SCITEQTYFFDNDKSFSGVLDGNCGRIFHGEKLMNTNLIIFIMVESKTCPCDTRLLI 1020  
DB 1020 SCITEQTYFFDNDKSFSGVLDGNCGRIFHGEKLMNTNLIIFIMVESKTCPCDTRLLI 1020  
QY 1015 SCITEQTYFFDNDKSFSGVLDGNCGRIFHGEKLMNTNLIIFIMVESKTCPCDTRLLI 1015  
DB 1015 SCITEQTYFFDNDKSFSGVLDGNCGRIFHGEKLMNTNLIIFIMVESKTCPCDTRLLI 1015  
QY 1063 QAEQTS DGNPCDMVKQPRYRKGPDPVCFDNNVLEDYTDCCGVS 1063  
DB 1063 QAEQTS DGNPCDMVKQPRYRKGPDPVCFDNNVLEDYTDCCGVS 1058



RESULT 9  
US-08-455-543A-56  
Sequence 56, Application US/08455543A  
Patent No. 5792846  
GENERAL INFORMATION:  
APPLICANT: Harpold, Michael  
APPLICANT: Ellis, Steven  
APPLICANT: Williams, Mark  
APPLICANT: Feldman, Daniel  
APPLICANT: McCue, Ann  
APPLICANT: Brenner, Robert  
TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
TITLE OF INVENTION: METHODS  
NUMBER OF SEQUENCES: 57  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Brown, Martin, Haller & McClain  
STREET: 1660 Union Street  
CITY: San Diego  
STATE: California  
COUNTRY: USA  
ZIP: 92101-2926  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/455,543A  
FILING DATE: May 31, 1995  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/223,305  
FILING DATE: April 4, 1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 6362-52517  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 56:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1084 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
US-08-455-543A-56

Query Match 99.0%; Score 5542.5; DB 1; Length 1084;  
Best Local Similarity 99.2%; Pred. No. 0;  
Matches 1055; Conservative 0; Mismatches 1; Indels 7; Gaps 1;

QY	1	MAAGCLLALTTLT	QSLILIGPSSSE	PPSAVTIKSWDK	MQEDLVTLAKT	ASGVNQLVDI	60																																		
DB	1	MAAGCLLALTTLT	QSLILIGPSSSE <td>PPSAVTIKSWDK<td>MQEDLVTLAKT<td>ASGVNQLVDI<td>60</td></td></td></td>	PPSAVTIKSWDK <td>MQEDLVTLAKT<td>ASGVNQLVDI<td>60</td></td></td>	MQEDLVTLAKT <td>ASGVNQLVDI<td>60</td></td>	ASGVNQLVDI <td>60</td>	60																																		
QY	61	YEKYQDLYTVE <td>PNNARQLVEIAA</td> <td>RDIEKLLSNRS<td>KALVSLALEA</td><td>EKVAQAAHORE</td><td>FASN 120</td></td>	PNNARQLVEIAA	RDIEKLLSNRS <td>KALVSLALEA</td> <td>EKVAQAAHORE</td> <td>FASN 120</td>	KALVSLALEA	EKVAQAAHORE	FASN 120																																		
DB	61	YEKYQDLYTVE <td>PNNARQLVEIAA</td> <td>RDIEKLLSNRS<td>KALVSLALEA</td><td>EKVAQAAHORE</td><td>FASN 120</td></td>	PNNARQLVEIAA	RDIEKLLSNRS <td>KALVSLALEA</td> <td>EKVAQAAHORE</td> <td>FASN 120</td>	KALVSLALEA	EKVAQAAHORE	FASN 120																																		
QY	121	EVVYYNAKDDL	PEKNDSEPGS <td>ORIKPVPFIE</td> <td>DANFRQISY<td>QHAANHIPD</td><td>TIYEGSTIVL 180</td></td>	ORIKPVPFIE	DANFRQISY <td>QHAANHIPD</td> <td>TIYEGSTIVL 180</td>	QHAANHIPD	TIYEGSTIVL 180																																		
DB	121	EVVYYNAKDDL	PEKNDSEPGS <td>ORIKPVPFIE</td> <td>DANFRQISY<td>QHAANHIPD</td><td>TIYEGSTIVL 180</td></td>	ORIKPVPFIE	DANFRQISY <td>QHAANHIPD</td> <td>TIYEGSTIVL 180</td>	QHAANHIPD	TIYEGSTIVL 180																																		
QY	181	NELNWT	SALDEVEFK <td>NREDDPSL</td> <td>LMQVFGS<td>ATGLARYP</td><td>PASPWVDSR</td><td>TNPKNIDLYDVR 240</td></td>	NREDDPSL	LMQVFGS <td>ATGLARYP</td> <td>PASPWVDSR</td> <td>TNPKNIDLYDVR 240</td>	ATGLARYP	PASPWVDSR	TNPKNIDLYDVR 240																																	
DB	181	NELNWT	SALDEVEFK <td>NREDDPSL</td> <td>LMQVFGS<td>ATGLARYP</td><td>PASPWVDSR</td><td>TNPKNIDLYDVR 240</td></td>	NREDDPSL	LMQVFGS <td>ATGLARYP</td> <td>PASPWVDSR</td> <td>TNPKNIDLYDVR 240</td>	ATGLARYP	PASPWVDSR	TNPKNIDLYDVR 240																																	
QY	241	RPWYIOGAAS	PKDMLILVD	YSGVSGLT	LKIRTSV	SEMLETIS	DDDFVNVASF	NSNAQD 300																																	
DB	241	RPWYIOGAAS	PKDMLILVD	YSGVSGLT	LKIRTSV	SEMLETIS	DDDFVNVASF	NSNAQD 300																																	
QY	301	VSCFQHLVQ	ANVRNKKV	LKDAVNNI	TAKGTYK	GFSAFEQ	LLNYSRANC	NKIIML 360																																	
DB	301	VSCFQHLVQ	ANVRNKKV	LKDAVNNI	TAKGTYK	GFSAFEQ	LLNYSRANC	NKIIML 360																																	
QY	361	FTDGGERAQ	EINFKYK	DKKVEFR	FSVGOHNY	ERGPIOM	MACENKGY	YIEPSTGAIR 420																																	
DB	361	FTDGGERAQ	EINFKYK	DKKVEFR	FSVGOHNY	ERGPIOM	MACENKGY	YIEPSTGAIR 420																																	
QY	421	INTQEYLDV	LGRPWL	AGDKAKO	VQNTVY	LDALGLV	ITGTLPV	FNITGQFENK 480																																	
DB	421	INTQEYLDV	LGRPWL	AGDKAKO	VQNTVY	LDALGLV	ITGTLPV	FNITGQFENK 480																																	
QY	481	NQILGVMG	VDVSL	EIKRLTP	RFTLCP	NGYYFA	IDP	NGYVLLHPNLQPNKPSQEPV 540																																	
DB	481	NQILGVMG	VDVSL	EIKRLTP	RFTLCP	NGYYFA	IDP	NGYVLLHPNLQPNKPSQEPV 540																																	
QY	541	DFLDAELN	DIKVEIR	NKIMID	GSEKTR	FTLVKS	QDERY	IDKGNRTYTWPNGTDYS 600																																	
DB	541	DFLDAELN	DIKVEIR	NKIMID	GSEKTR	FTLVKS	QDERY	IDKGNRTYTWPNGTDYS 600																																	
QY	601	ALVLPYS	FYIKAK	LEETIT	QARS	KKMKD	SETL	KPDNFEESGTYFIAPROYCNDLKI 660																																	
DB	601	ALVLPYS	FYIKAK	LEETIT	QARS	KKMKD	SETL	KPDNFEESGTYFIAPROYCNDLKI 660																																	
QY	661	SDNTEFL	NFNEF	IDRKT	PNNP	SCNADL	INRV	LLDAGFTNELVQVNSKQNKIKGV 720																																	
DB	661	SDNTEFL	NFNEF	IDRKT	PNNP	SCNADL	INRV	LLDAGFTNELVQVNSKQNKIKGV 720																																	
QY	721	FVYTDG	GITRV	YPKEA	GNWQEN	PETYES	FYKRS	LDNDNYVTAPYFNKSGGAYESGI 780																																	
DB	721	FVYTDG	GITRV	YPKEA	GNWQEN	PETYES	FYKRS	LDNDNYVTAPYFNKSGGAYESGI 780																																	
QY	781	MYSKAVE	IYIQG	KLPAV	YGIKID	VNSIEN	ETKTS	IRDP	CAGPVCDCCKRNSDVMDCVI 840																																
DB	781	MYSKAVE	IYIQG	KLPAV	YGIKID	VNSIEN	ETKTS	IRDP	CAGPVCDCCKRNSDVMDCVI 840																																
QY	841	LDDGGF	LLMAN	HDDYT	NIQ	IGRFF	GEID	PS	LMRHLVNI	SVYAFN	KSYDIQ	SVCP	EPGAAPKQ 900																												
DB	841	LDDGGF	LLMAN	HDDYT	NIQ	IGRFF	GEID	PS	LMRHLVNI	SVYAFN	KSYDIQ	SVCP	EPGAAPKQ 900																												
QY	901	GAGHRS	AYVPS	VADIL	QIG	WATAA	WSIL	QQFL	LSLT	PPR	LEA	VE	ME	DD	DTASLSKQ 960																										
DB	901	GAGHRS	AYVPS	VADIL	QIG	WATAA	WSIL	QQFL	LSLT	PPR	LEA	VE	ME	DD	DTASLSKQ 960																										
QY	961	SCITEQ	TYFF	ND	SKS	FS	GV	LD	C	GN	C	S	R	F	H	G	E	K	L	M	N	T	N	L	I	F	I	M	V	E	S	K	T	C	P	C	D	R	L	L	I 1020
DB	961	SCITEQ	TYFF	ND	SKS	FS	GV	LD	C	GN	C	S	R	F	H	G	E	K	L	M	N	T	N	L	I	F	I	M	V	E	S	K	T	C	P	C	D	R	L	L	I 1020
QY	1021	QAEQTS	D	G	P	N	C	D	M	W	K	P	R	Y	K	G	P	D	V	C	F	D	N	N	V	L	E	D	T	D	G	G	V	S 1063							

Db 1014 QAEQSDGPNPCDMVKQPRYKGPVCFDNNVLEDYDCGGVS 1056

RESULT 10  
US-08-223-305C-56  
; Sequence 56, Application us/08223305C  
; Patent No. 5851824  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FASTSEQ Version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/223,305C  
; FILING DATE: April 4, 1994  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/868,354  
; FILING DATE: April 10, 1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/482,384  
; FILING DATE: 20-FEB-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/US89/01408  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/176,899  
; FILING DATE: 04-APR-1988  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 52516 (P519739)  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 56:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1084 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FRAGMENT TYPE: internal  
US-08-223-305C-56

Query Match 99.0%; Score 5542.5; DB 2; Length 1084;

Best Local Similarity 99.2%; Pred. No. 0;  
Matches 1055; Conservative 0; Mismatches 1; Indels 7; Gaps 1;

QY 1 MAAGCLLALTTLTFLQSLILIGPSSEPPFSAVTIKSWDKMQEDLVTLAKTAGSVNQLVDI 60  
DB 1 MAAGCLLALTTLTFLQSLILIGPSSEPPFSAVTIKSWDKMQEDLVTLAKTAGSVNQLVDI 60  
QY 61 YEKYODLYTVEPNNAQLVEIAARDIEKLLSNRSKALYSALAEAEKVQAAHQRWEDFASN 120  
DB 61 YEKYODLYTVEPNNAQLVEIAARDIEKLLSNRSKALYSALAEAEKVQAAHQRWEDFASN 120  
QY 121 EYVYNKADDDLPKNDSEPGSQRIKPVFIEDANFGROISYQHAHVHIPTDIYEGSTIVL 180  
DB 121 EYVYNKADDDLPKNDSEPGSQRIKPVFIEDANFGROISYQHAHVHIPTDIYEGSTIVL 180  
QY 181 NELNWTLSALDEVFKKREEDPSLLQWVFGSATGLARYYPASVPWDNSRTPNKIDLYDVR 240  
DB 181 NELNWTLSALDEVFKKREEDPSLLQWVFGSATGLARYYPASVPWDNSRTPNKIDLYDVR 240  
QY 241 RPWYIQGAASPKDMLILVDVSGVSGLTFLKIRTSVSEMLETSLDDDFVNVASFNSAQD 300  
DB 241 RPWYIQGAASPKDMLILVDVSGVSGLTFLKIRTSVSEMLETSLDDDFVNVASFNSAQD 300  
QY 301 VSCFQHLVQANVRNKKVYLKDAVNITAKGIDYKGFSAFEQLLNNVSRANCKIIML 360  
DB 301 VSCFQHLVQANVRNKKVYLKDAVNITAKGIDYKGFSAFEQLLNNVSRANCKIIML 360  
QY 361 FTDGGEERAQEIFNKYNKDKKRVFRFVSGOHNYERGPQIOMACENKGYIYEIPSIGAIR 420  
DB 361 FTDGGEERAQEIFNKYNKDKKRVFRFVSGOHNYERGPQIOMACENKGYIYEIPSIGAIR 420  
QY 421 INTQEYLDVLGRPMVLADGKAKQVQWTVNYLDLDELGLVITGTLFPVFNITQGFENKTLK 480  
DB 421 INTQEYLDVLGRPMVLADGKAKQVQWTVNYLDLDELGLVITGTLFPVFNITQGFENKTLK 480  
QY 481 NQLILGVMGVDVSLIEDIKRLTPRTLCPCNGYFFAIDPNGYVLLHPNLPKPKSQEPVTL 540  
DB 481 NQLILGVMGVDVSLIEDIKRLTPRTLCPCNGYFFAIDPNGYVLLHPNLPKPKSQEPVTL 540  
QY 541 DFLDAELENDIKVEIRNMKIDGESGKTRFLVKSQDERYIDKGNRTYTWTVPVNGTDYSL 600  
DB 541 DFLDAELENDIKVEIRNMKIDGESGKTRFLVKSQDERYIDKGNRTYTWTVPVNGTDYSL 600  
QY 601 ALVLTYSFYIYKAKLEETITQARY-----SETLKPDPNEESGYTFIAPRDYCNLDKI 660  
DB 601 ALVLTYSFYIYKAKLEETITQARY-----SETLKPDPNEESGYTFIAPRDYCNLDKI 660  
QY 661 SDNTEFLNPFNEIDRKTNNPSCNADLINRVLLDAGFTNELVQNYWSKQNKIKGVYKAR 720  
DB 661 SDNTEFLNPFNEIDRKTNNPSCNADLINRVLLDAGFTNELVQNYWSKQNKIKGVYKAR 720  
QY 721 FVYTDGGITRVYPKEAGENQENPETVEDSFYKRSNDNDNYVFTAPVFNKSGPGAYESGI 780  
DB 721 FVYTDGGITRVYPKEAGENQENPETVEDSFYKRSNDNDNYVFTAPVFNKSGPGAYESGI 780  
QY 774 MYSKAVEIYIQGKLLKPAVVGKIDVNSWIENFTKTSIRDPGAGPVCDCRNSDVMDCVI 833  
DB 774 MYSKAVEIYIQGKLLKPAVVGKIDVNSWIENFTKTSIRDPGAGPVCDCRNSDVMDCVI 833  
QY 841 LDDGGFLLMANHDDYTNOIGRFFGEIDPSLMRHLVNI SVTAFNKSQYDYQSVCEPGAAPKQ 900  
DB 841 LDDGGFLLMANHDDYTNOIGRFFGEIDPSLMRHLVNI SVTAFNKSQYDYQSVCEPGAAPKQ 900  
QY 901 GAGHRSAYVPSVADIIQIGWATAAASIIQQFLSLTFFPRLLEAVEMEDDDFTASLSKQ 960  
DB 901 GAGHRSAYVPSVADIIQIGWATAAASIIQQFLSLTFFPRLLEAVEMEDDDFTASLSKQ 960  
QY 961 SCITEQTQYFFDNDKSKFSGLVDCGNC SRIFHGEKLNNTNLI FIMVESKGTCPDTRLLI 1020  
DB 961 SCITEQTQYFFDNDKSKFSGLVDCGNC SRIFHGEKLNNTNLI FIMVESKGTCPDTRLLI 1020  
QY 1021 QAEQSDGPNPCDMVKQPRYKGPVCFDNNVLEDYDCGGVS 1063  
DB 1021 QAEQSDGPNPCDMVKQPRYKGPVCFDNNVLEDYDCGGVS 1063

Db 1014 QAEQSDGPNCDMVKQPRYKKGPDVCFDNNVLEDYTDGGSV 1056

## RESULT 11

US-08-455-543A-53  
Sequence 53, Application US/08455543A  
Patent No. 5792846  
GENERAL INFORMATION:  
APPLICANT: Harpold, Michael  
APPLICANT: Ellis, Steven  
APPLICANT: Williams, Mark  
APPLICANT: Feldman, Daniel  
APPLICANT: McCue, Ann  
APPLICANT: Brenner, Robert  
TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
TITLE OF INVENTION: METHODS  
NUMBER OF SEQUENCES: 57  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Brown, Martin, Haller & McClain  
STREET: 1660 Union Street  
CITY: San Diego  
STATE: California  
COUNTRY: USA  
ZIP: 92101-2926  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/455,543A  
FILING DATE: May 31, 1995  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/223,305  
FILING DATE: April 4, 1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 6362-52517  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 53:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1103 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
US-08-455-543A-53

Query Match 98.6%; Score 5523; DB 1; Length 1103;  
Best Local Similarity 97.5%; Pred. No. 0;  
Matches 1055; Conservative 0; Mismatches 1; Indels 26; Gaps 2;  
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DB 1 MAAGCLLALTLTLFQSLIGSSSEPPPSAVTIKSWDKMQEDLVTLAKTASGVNQLVDI 60  
QY 61 YEKYQDLYTVEPNARQLVEIAARDIEKLLSNRSKALVSALAEKVAQAHHQWRDFFASN 120  
DB 61 YEKYQDLYTVEPNARQLVEIAARDIEKLLSNRSKALVSALAEKVAQAHHQWRDFFASN 120  
QY 121 EVVYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAHVHTPTDIYEGSTIVL 180  
DB 121 EVVYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGRQISYQHAHVHTPTDIYEGSTIVL 180  
QY 181 NELNWTSAIDVFKKREEDPSLLQVFGSATGLARYYPASFWVDNSRTPNKIDLYDVR 240  
DB 181 NELNWTSAIDVFKKREEDPSLLQVFGSATGLARYYPASFWVDNSRTPNKIDLYDVR 240  
QY 241 RPWYIOGAASPDKMLILVDVSGVSGTLKLIRTSVSEMLETSLDDDFVNFVAFNSNAQD 300  
DB 241 RPWYIOGAASPDKMLILVDVSGVSGTLKLIRTSVSEMLETSLDDDFVNFVAFNSNAQD 300  
QY 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGIDYKKGFSFAFEQLLNNVSRANCNKIIML 360  
DB 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGIDYKKGFSFAFEQLLNNVSRANCNKIIML 360  
QY 361 FTDGGEERAQEIFNKYNKKVRFVRSVGOHNYERGIOWMACENKGYEYIPEISGIR 420  
DB 361 FTDGGEERAQEIFNKYNKKVRFVRSVGOHNYERGIOWMACENKGYEYIPEISGIR 420  
QY 421 INTOEYLDVLRPMVLGADKAKQVNTNVDLDELGLVITGTLPVFNITGFENKTNLK 480  
DB 421 INTOEYLDVLRPMVLGADKAKQVNTNVDLDELGLVITGTLPVFNITGFENKTNLK 480  
QY 481 NQLILGVNGVDVSLIEDIKRLTPRTLCPNGYIFAIDPNGYVLLHNPLOPK----- 530  
DB 481 NQLILGVNGVDVSLIEDIKRLTPRTLCPNGYIFAIDPNGYVLLHNPLOPK----- 530  
QY 531 -----NPKSQEPVTLDFDLAELENDIKVEIRNKKMIDGESGKTRTLVKSDERYI 581  
DB 541 LRKRRPNIQNPKSQEPVTLDFDLAELENDIKVEIRNKKMIDGESGKTRTLVKSDERYI 600  
QY 582 DKGNTYTWTPVNGTDYSLALVLPYTFYIYKAKLEETITQARSKKGMKDSITLKPDNF 641  
DB 601 DKGNTYTWTPVNGTDYSLALVLPYTFYIYKAKLEETITQARY-----SETLKPDNF 653  
QY 642 EESGYTFIAPRDYCNLDKISDNNTFLLNFNEFIDRKTTPNPNPCNADLINRVLLDAGFTN 701  
DB 654 EESGYTFIAPRDYCNLDKISDNNTFLLNFNEFIDRKTTPNPNPCNADLINRVLLDAGFTN 713  
QY 702 ELVQYNSKQKNIGVKARFVVTGGITRVYPKEAGENWQENPETEYEDSFYKRSLDNDNY 761  
DB 714 ELVQYNSKQKNIGVKARFVVTGGITRVYPKEAGENWQENPETEYEDSFYKRSLDNDNY 773  
QY 762 VFTAPYFNKSGPGAYESGIMYSKAVEIYIOGKLKPAVVGKIDVNSWIENFTKTSIRDP 821  
DB 774 VFTAPYFNKSGPGAYESGIMYSKAVEIYIOGKLKPAVVGKIDVNSWIENFTKTSIRDP 833  
QY 822 CAGPVCCKRNSDVMDCVILDDGGFLMANHDDVTNQIGRFFGEIDPSLMRHLNVSIVA 881  
DB 834 CAGPVCCKRNSDVMDCVILDDGGFLMANHDDVTNQIGRFFGEIDPSLMRHLNVSIVA 893  
QY 882 FNKSYDYQSVCEPGAAPKQAGHRSAYVPSVADILQIGWATAAAWSILQOFLSLTTPR 941  
DB 894 FNKSYDYQSVCEPGAAPKQAGHRSAYVPSVADILQIGWATAAAWSILQOFLSLTTPR 953  
QY 942 LLEAVEMEDDDFTASLSKQSCITETQYFFFDNDSKSFSGVLDGCGNCSIFHGEKLMNTNL 1001  
DB 954 LLEAVEMEDDDFTASLSKQSCITETQYFFFDNDSKSFSGVLDGCGNCSIFHGEKLMNTNL 1013

QY 1002 IFIMVSKGTCPCDTRLLIOAEOQSDGNPCDMVKOPRYKRGDVCDFDNNVLEDTDCGG 1061  
Db 1014 IFIMVSKGTCPCDTRLLIOAEOQSDGNPCDMVKOPRYKRGDVCDFDNNVLEDTDCGG 1073

QY 1062 VS 1063  
Db 1074 VS 1075

RESULT 12  
US-08-223-305C-53  
; Sequence 53, Application US/08223305C  
; Patent No. 5851824  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; NUMBER OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FastSeq Version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/223,305C  
; FILING DATE: April 4, 1994  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/868,354  
; FILING DATE: April 10, 1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/620,250  
; FILING DATE: 30-NOV-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/482,384  
; FILING DATE: 20-FEB-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/US89/01408  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/176,899  
; FILING DATE: 04-APR-1988  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 52516 (P519739)  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 53:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1103 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein

; FRAGMENT TYPE: Internal  
US-08-223-305C-53

Query Match 98.6%; Score 5523; DB 2; Length 1103;  
Best Local Similarity 97.5%; Pred. NO. 0;  
Matches 1055; Conservative 0; Mismatches 1; Indels 26; Gaps 2;

QY 1 MAAGCLIALTLTLFQSLIGPSSEPPPSAVTIKSWDKMQEDLVTLAKTAGSGVNLVDI 60  
Db 1 MAAGCLIALTLTLFQSLIGPSSEPPPSAVTIKSWDKMQEDLVTLAKTAGSGVNLVDI 60  
QY 61 YEKYQDLYTVEPNNAQOLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120  
Db 61 YEKYQDLYTVEPNNAQOLVEIAARDIEKLLSNRSKALVSLALEAEKVQAAHQWREDFASN 120  
QY 121 EYVYNAKDDLDPEKNDSEPGSORIKPVFIEDANFGQISYQHAHVHPTDIEGSGTIVL 180  
Db 121 EYVYNAKDDLDPEKNDSEPGSORIKPVFIEDANFGQISYQHAHVHPTDIEGSGTIVL 180  
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Db 181 NELNWTSADEVEFKKNREEDPSLLWVFGSATGLARYYPASPWVDSNRTPNKIDLYDVR 240  
QY 241 RPWYIOGAASPDKMLILVDVSGVSGLTTLKIRTSVSEMLETSDDDFVNVASFNSNAQD 300  
Db 241 RPWYIOGAASPDKMLILVDVSGVSGLTTLKIRTSVSEMLETSDDDFVNVASFNSNAQD 300  
QY 301 VSCFOHLVQANVRNKKVLDVANNITAKGTDYKKGFSFAFEOQLLNVNFRANCNKIIML 360  
Db 301 VSCFOHLVQANVRNKKVLDVANNITAKGTDYKKGFSFAFEOQLLNVNFRANCNKIIML 360  
QY 361 FTDGGEERAQEIENKYNKDKKVRFRFVSGQHNYERGIQMACENKGGYIYEIPSGAIR 420  
Db 361 FTDGGEERAQEIENKYNKDKKVRFRFVSGQHNYERGIQMACENKGGYIYEIPSGAIR 420  
QY 421 INTQEYLDVLGRPNVLADKAKOVQNTNVDLALGLVITGTLPVENITGQENKTNLK 480  
Db 421 INTQEYLDVLGRPNVLADKAKOVQNTNVDLALGLVITGTLPVENITGQENKTNLK 480  
QY 481 NQLILGVMGVDVSLDIEKRLTPFTLCPCNGYYPFADIPNGVLLHPNLPK----- 530  
Db 481 NQLILGVMGVDVSLDIEKRLTPFTLCPCNGYYPFADIPNGVLLHPNLPK----- 530  
QY 531 -----NPKSQEPVTLDFDAELENDIKVEIRNKMIDGESGKTFRTLVSQDERYI 581  
Db 541 LRKRPNQIONPKSQEPVTLDFDAELENDIKVEIRNKMIDGESGKTFRTLVSQDERYI 600  
QY 582 DKGNRITYTTPVNGTDYSLALVLTYSFYIKAKLETTIQAARKKGGKMDSETLKPDNF 641  
Db 601 DKGNRITYTTPVNGTDYSLALVLTYSFYIKAKLETTIQAARKKGGKMDSETLKPDNF 653  
QY 642 EESGYTFIAPRDYCNLDKISDNNTFELLNNEFTDRKTPNPNPCNADLINRVLDDAGFTN 701  
Db 654 EESGYTFIAPRDYCNLDKISDNNTFELLNNEFTDRKTPNPNPCNADLINRVLDDAGFTN 713  
QY 702 ELVQNTWSKQKNIKGVKARVVTGGITRVYPKEAGENWOENPETYEDSYKKSLDNDNY 761  
Db 714 ELVQNTWSKQKNIKGVKARVVTGGITRVYPKEAGENWOENPETYEDSYKKSLDNDNY 773  
QY 762 VFTAPYFNKSGPGAYESGIMVSKAVEYIQQKLLKPAVGIKIDVNSWIENFTKSTRDP 821  
Db 774 VFTAPYFNKSGPGAYESGIMVSKAVEYIQQKLLKPAVGIKIDVNSWIENFTKSTRDP 833  
QY 822 CAGPVCDCRKNRSDVMDCVILDDGGFLIMANHDDYTQIGRFFGFEIDPISLMRHLVNISVYA 881  
Db 834 CAGPVCDCRKNRSDVMDCVILDDGGFLIMANHDDYTQIGRFFGFEIDPISLMRHLVNISVYA 893  
QY 882 FNKSYDYQSVCEPGAAPKOGAGHRSAYVPSVADILQIGHWATAAANSILOQFLLSTFPR 941  
Db 894 FNKSYDYQSVCEPGAAPKOGAGHRSAYVPSVADILQIGHWATAAANSILOQFLLSTFPR 953  
QY 942 LLEAVEMEDDDFTASLSKQSCITEQYQYFDDNDSKSFSGVLDGCGNCSRIPIHGKLANNTL 1001

Db 954 LLEAVEMEDDDFTASLSKQSCITEQIYFFDNDKSFSGVLDGNCNRIEFGKLMNTNL 1013  
QY 1002 IFIWESKGTCPDTRLLIOAEOQTSQPNPCDMVKQPRYKRGDPVCFDNNVLEDYDCGG 1061  
Db 1014 IFIWESKGTCPDTRLLIOAEOQTSQPNPCDMVKQPRYKRGDPVCFDNNVLEDYDCGG 1073  
QY 1062 VS 1063  
Db 1074 VS 1075

RESULT 13  
US-08-455-543A-55  
Sequence 55, Application US/08455543A  
Patent No. 5792846  
GENERAL INFORMATION:  
APPLICANT: Harpold, Michael  
APPLICANT: Ellis, Steven  
APPLICANT: Williams, Mark  
APPLICANT: Feldman, Daniel  
APPLICANT: McCue, Ann  
APPLICANT: Brenner, Robert  
TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
TITLE OF INVENTION: METHODS  
NUMBER OF SEQUENCES: 57  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Brown, Martin, Haller & McClain  
STREET: 1660 Union Street  
CITY: San Diego  
STATE: California  
COUNTRY: USA  
ZIP: 92101-2926  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSEQ Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/455,543A  
FILING DATE: May 31, 1995  
PRIORITY APPLICATION DATA:  
APPLICATION NUMBER: 08/223,305  
FILING DATE: April 4, 1994  
PRIORITY APPLICATION DATA:  
APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
PRIORITY APPLICATION DATA:  
APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIORITY APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
PRIORITY APPLICATION DATA:  
APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIORITY APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIORITY APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIORITY APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 6362-52517  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 55:

SEQUENCE CHARACTERISTICS:  
LENGTH: 1079 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
US-08-455-543A-55  
Query Match 98.3%; Score 5503; DB 1; Length 1079;  
Best Local Similarity 98.8%; Pred. No. 0;  
Matches 1050; Conservative 0; Mismatches 1; Indels 12; Gaps 2;  
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Db 1 MAAGCLLALTTLFQSLIGPSSSEEPSPSAVTIKSWYDKMQEDLVTLAKTAGSYNQLVDI 60  
QY 61 YEKYQDLYTVEPNARQLVEIARDEKLLSNRSKALVSLALEAEKVAQAHHOWREDFASN 120  
Db 61 YEKYQDLYTVEPNARQLVEIARDEKLLSNRSKALVSLALEAEKVAQAHHOWREDFASN 120  
QY 121 EYVYNAKDDLDPEKNDSEPGSORIKPVFTEDANFGROIYQHAHVHPTDIYEGSTIVL 180  
Db 121 EYVYNAKDDLDPEKNDSEPGSORIKPVFTEDANFGROIYQHAHVHPTDIYEGSTIVL 180  
QY 181 NELNWTSSALDEVEFKNREEDPSLLQWVFGSATGLARYYPASPMVDNSRTPNKIDLYDVR 240  
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Db 241 RPYIQAASPKDMLILVDVSGVSLTLKLIITSVSEMLETISDDDFVNVASFNSNAQD 300  
QY 301 VSCFQHLVQANVRNKKVLKDVANNITAKGITDYKGFSPAFEOALLNYSRANCNKIIML 360  
Db 301 VSCFQHLVQANVRNKKVLKDVANNITAKGITDYKGFSPAFEOALLNYSRANCNKIIML 360  
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Db 361 FTDGGEERAQEIFNKYNKDKKVRFRFSVQHNRYERGPQIOMMACENKGYIYEIPSGAIR 420  
QY 421 INTQEYLDVLGRPMVLGAKAKOVQNTNYLDALGLVITGTLPVFNITGQFENKTNLK 480  
Db 421 INTQEYLDVLGRPMVLGAKAKOVQNTNYLDALGLVITGTLPVFNITGQFENKTNLK 480  
QY 481 NOLILGVMGVDSLEDIKRLTPRTLCPCNGYFPAIDPNGVLLHPNLPKNSQEPVTL 540  
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QY 541 DFLDAELENKIKVEIRNKMIDGESGEKFTTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600  
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QY 601 ALVLPYISFYIIKALEETITQARSKKGMKDSKSETLKPONFESGTYFTIAPRYCNDLKI 660  
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QY 661 SDNNTFLLNFNEFIDRKTNNPNSCNADLINRVLLDAGFTNELVQNVWSKQKNIKGVKAR 720  
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QY 721 FVYTDGGITRVYPKEAGENQENPETEYDFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
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Db 781 MYSKAVEIYIQGLLKPAVVGKIDVNSWNIENFTKTSIRDPGAGPVCDCKRNSDVMDCVI 840  
QY 841 LDDGGFLLMANHDDYTNOIGREFGEIDPSLMRHLNINISVYAFNKSVDYOSVCEPGAAPKQ 900  
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Date: Jun 8, 2001 7:58 PM

About: Results were produced by the GenCore software, version 4.5,  
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-DELOP=6.000 -DELEXT=7.000 -START=1 -MATRIX=blowm62  
-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR\_SCORE=pct  
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-NORM=ext -MINLEN=0 -MAXLEN=200000000  
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Query length: 1063  
Database: Issued\_Patents\_NA.\*  
Database sequences: 302621  
Database length: 87301344  
Search time (sec): 184.840000

score\_list:

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seq\_documentation\_block:

; Sequence 24, Application US/07745206A  
; Patent No. 5429921  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: McCue, Ann  
; APPLICANT: Feldman, Daniel  
; TITLE OF INVENTION: Human Calcium Channel Compositions and  
; TITLE OF INVENTION: Methods  
; NUMBER OF SEQUENCES: 32  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Fitch, Even, Tabin & Flannery  
; STREET: 135 S. LaSalle  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: U.S.A.  
; ZIP: 60603

COMPUTER READABLE FORM:

COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/745,206A  
FILING DATE: 19910815  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: Feder, Scott B  
REFERENCE/DOCKET NUMBER: 51504  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312-372-7842

INFORMATION FOR SEQ ID NO: 24:

SEQUENCE CHARACTERISTICS:  
LENGTH: 3566 base pairs  
TYPE: NUCLEIC ACID  
STRANDEDNESS: unknown  
TOPOLOGY: unknown  
MOLECULE TYPE: DNA (genomic)  
FEATURE:  
NAME/KEY: CDS  
LOCATION: 1..3273  
US-07-745-206A-24

alignment\_scores:

Quality: 5599.00 Length: 1063  
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seq\_documentation\_block:  
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; Patent No. 5876958  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: Human Calcium Channel Compositions and  
; TITLE OF INVENTION: Methods  
; NUMBER OF SEQUENCES: 32  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/311,363  
; FILING DATE:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 6362-51506  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 24:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 3566 base pairs  
; TYPE: nucleic acid  
; STRANDEDNESS: unknown

; TOPOLOGY: unknown  
 ; MOLECULE TYPE: DNA (genomic)  
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## alignment\_scores:

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Align seg 1/1 to: US-08-311-363-24 from: 1 to: 3566

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; Patent No. 5792846  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street

CITY: San Diego  
STATE: California  
COUNTRY: USA  
ZIP: 92101-2926  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/455,543A  
FILING DATE: May 31, 1995  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/223,305  
FILING DATE: April 4, 1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 6362-52517  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
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; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: Feldman, Daniel
; APPLICANT: McCue, Ann
; APPLICANT: Brenner, Robert
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND
; MEDIUM OF INVENTION: METHODS
; NUMBER OF SEQUENCES: 57
; CORRESPONDENCE ADDRESS:
; STREET: 1660 Union Street
; CITY: San Diego
; STATE: California
; COUNTRY: USA
; ZIP: 92101-2926
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq Version 1.5
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/455,543A
; FILING DATE: May 31, 1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/223,305
; FILING DATE: April 4, 1994
; PRIOR APPLICATION DATA:
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APPLICATION NUMBER: US 07/745,206
FILING DATE: 15-AUG-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/620,250
FILING DATE: 30-NOV-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/482,384
FILING DATE: 20-FEB-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/603,751
FILING DATE: 04-APR-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/US89/01408
FILING DATE: 04-APR-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/176,899
FILING DATE: 04-APR-1988
ATTORNEY/AGENT INFORMATION:
NAME: Seidman, Stephanie L.
REGISTRATION NUMBER: 33,779
REFERENCE/DOCKET NUMBER: 6362-52517
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619)238-0999
TELEFAX: (619)238-0062
INFORMATION FOR SEQ ID NO: 33:
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: APPLICANT: Harpold, Michael  
: APPLICANT: Ellis, Steven  
: APPLICANT: Williams, Mark  
: APPLICANT: Feldman, Daniel  
: APPLICANT: McCue, Ann  
: APPLICANT: Brenner, Robert  
: TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
: TITLE OF INVENTION: METHODS  
: NUMBER OF SEQUENCES: 29  
: CORRESPONDENCE ADDRESS:  
: ADDRESSEE: BROWN, MARTIN, HALLER & MCCLAIN  
: STREET: 1660 UNION STREET  
: CITY: SAN DIEGO  
: STATE: CA  
: COUNTRY: USA  
: ZIP: 92101  
: COMPUTER READABLE FORM:  
: MEDIUM TYPE: Floppy disk  
: COMPUTER: IBM PC compatible  
: OPERATING SYSTEM: PC-DOS/MS-DOS  
: SOFTWARE: Patent In Release #1.0, Version #1.25  
: CURRENT APPLICATION DATA:  
: APPLICATION NUMBER: US/08/193,078B  
: FILING DATE: 07-FEB-1994  
: CLASSIFICATION: 435  
: PRIOR APPLICATION DATA:  
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: FILING DATE: 10-APR-1992  
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: APPLICATION NUMBER: US 07/745,206  
: FILING DATE: 15-AUG-1991  
: ATTORNEY/AGENT INFORMATION:  
: NAME: Seidman, Stephanie L.  
: REGISTRATION NUMBER: 33,779  
: REFERENCE/DOCKET NUMBER: 6362-53607  
: TELECOMMUNICATION INFORMATION:  
: TELEPHONE: 619-238-0999  
: TELEFAX: 619-238-0062  
: INFORMATION FOR SEQ ID NO: 11:  
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; Sequence 11, Application US/08223305C
; Patent No. 5851824
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: Feldman, Daniel
; APPLICANT: McCue, Ann
; APPLICANT: Brenner, Robert
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND
; TITLE OF INVENTION: METHODS
; NUMBER OF SEQUENCES: 57
; CORRESPONDENCE ADDRESS:
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APPLICATION NUMBER: US 07/620,250
FILING DATE: 30-NOV-1990
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 07/482,384
FILING DATE: 20-FEB-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/603,751
FILING DATE: 04-APR-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/US89/01408
FILING DATE: 04-APR-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/176,899
FILING DATE: 04-APR-1988
ATTORNEY/AGENT INFORMATION:
NAME: Seidman, Stephanie L.
REGISTRATION NUMBER: 33,779
REFERENCE/DOCKET NUMBER: 52516 (P519739)
TELEPHONE: (619)238-0999
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INFORMATION FOR SEQ ID NO: 33:
SEQUENCE CHARACTERISTICS:
LENGTH: 3600 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
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US-08-223-305C-33

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; Patent No. 5874236
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: Feidman, Daniel
; APPLICANT: McCue, Ann
; APPLICANT: Brenner, Robert
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND
; NUMBER OF SEQUENCES: 40
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Brown, Martin, Haller & McClain
; STREET: 1660 Union Street
; CITY: San Diego
; STATE: California
; COUNTRY: USA
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; COMPUTER READABLE FORM:
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; CURRENT APPLICATION DATA:
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; FILING DATE: 05-NOV-1993
; CLASSIFICATION: 435
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; FILING DATE: 11-AUG-1993
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; APPLICATION NUMBER: US 07/603,751
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; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: McCue, Ann  
; APPLICANT: Gillespie, Allison  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; NUMBER OF SEQUENCES: 38  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
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; ZIP: 92101  
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; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/08/290,012  
; FILING DATE: 11-AUG-1994  
; APPLICATION NUMBER: 08/149,097  
; FILING DATE: 5-NOV-1993  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/105,536  
; FILING DATE: 11-AUG-1993  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 519808  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619) 238-0999  
; TELEFAX: (619) 238-0062  
; INFORMATION FOR SEQ ID NO: 11:  
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; Patent No. 6040436

; GENERAL INFORMATION:

; APPLICANT: Franco, Rodrigo

; APPLICANT: Sun Chen, Ai Ru

; APPLICANT: Suey, David J.

; TITLE OF INVENTION: NUCLEIC ACID ENCODING HUMAN NEURONAL

; TITLE OF INVENTION: CALCIUM CHANNEL SUBUNITS

; NUMBER OF SEQUENCES: 6

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.

; STREET: Two Militia Drive

; CITY: Lexington

; STATE: MA



COUNTRY: USA  
Zip: 02173-4799  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/713.118  
FILING DATE: 16-SEP-1996  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: Mata, Elizabeth W.  
REGISTRATION NUMBER: 38,236  
REFERENCE/DOCKET NUMBER: ACC96-01  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-861-6240  
TELEFAX: 617-861-9540  
INFORMATION FOR SEQ ID NO: 3:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 3298 base pairs  
TYPE: nucleic acid  
STRANDEDNESS: double  
TOPOLOGY: linear  
MOLECULE TYPE: CDNA  
FEATURE:  
NAME/KEY: CDS  
LOCATION: 20..3292  
US-08-713-118-3

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; GENERAL INFORMATION:
; APPLICANT: Franco, Rodrigo
; APPLICANT: Sun Chen, Ai Ru
; APPLICANT: Suey, David J.
; TITLE OF INVENTION: NUCLEIC ACID ENCODING HUMAN NEURONAL
; TITLE OF INVENTION: CALCIUM CHANNEL SUBUNITS
; NUMBER OF SEQUENCES: 6
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
; STREET: Two Militia Drive
; CITY: Lexington
; STATE: MA
; COUNTRY: USA
; ZIP: 02173-4799
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/452.007
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/713.118
; FILING DATE: 16-SEP-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Mata, Elizabeth W.
; REGISTRATION NUMBER: 38,236
; REFERENCE/DOCKET NUMBER: ACC96-01
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-861-6240
; TELEFAX: 617-861-9540
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3298 base pairs
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; Sequence 20, Application US/08455543A
; Patent No. 5792846
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: Feldman, Daniel
; APPLICANT: McCue, Ann
; APPLICANT: Brenner, Robert
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND
; TITLE OF INVENTION: METHODS
; NUMBER OF SEQUENCES: 57
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Brown, Martin, Haller & McClain
; STREET: 1660 Union Street
; CITY: San Diego
; STATE: California
; COUNTRY: USA
; ZIP: 92101-2926
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ Version 1.5
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/455,543A
; FILING DATE: May 31, 1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/223,305
; FILING DATE: April 4, 1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/868,354
; FILING DATE: April 10, 1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/745,206
; FILING DATE: 15-AUG-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/620,250
; FILING DATE: 30-NOV-1990
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; APPLICATION NUMBER: US 07/482,384
; FILING DATE: 20-FEB-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/603,751
; FILING DATE: 04-APR-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US89/01408
; FILING DATE: 04-APR-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/176,899
; FILING DATE: 04-APR-1988
; ATTORNEY/AGENT INFORMATION:
; NAME: Seidman, Stephanie L.
; REGISTRATION NUMBER: 33,779
; REFERENCE/DOCKET NUMBER: 6362-52517
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619)238-0999
; TELEFAX: (619)238-0062
; INFORMATION FOR SEQ ID NO: 20:
; SEQUENCE CHARACTERISTICS:
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: Patent No. 5851824
: GENERAL INFORMATION:
: APPLICANT: Harpold, Michael
: APPLICANT: Ellis, Steven
: APPLICANT: Williams, Mark
: APPLICANT: Feldman, Daniel
: APPLICANT: McCue, Ann
: APPLICANT: Brenner, Robert
: TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND
: NUMBER OF SEQUENCES: 57
: CORRESPONDENCE ADDRESS:
: ADDRESSEE: Brown, Martin, Haller & McClain
: STREET: 1660 Union Street
: CITY: San Diego
: STATE: California
: COUNTRY: USA
: ZIP: 92101-2926
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Diskette
: COMPUTER: IBM Compatible
: OPERATING SYSTEM: DOS
: SOFTWARE: FastSeq Version 1.5
: CURRENT APPLICATION DATA:
: APPLICATION NUMBER: US/08/223,305C
: FILING DATE: April 4, 1994
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: 07/868,354
: FILING DATE: April 10, 1992
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: US 07/745,206
: FILING DATE: 15-AUG-1991
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: US 07/620,250
: FILING DATE: 30-NOV-1990
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: US 07/482,384
: FILING DATE: 20-FEB-1990
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: APPLICATION NUMBER: US 07/603,751
: FILING DATE: 04-APR-1989
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: WO PCT/US89/01408
: FILING DATE: 04-APR-1989
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: US 07/176,899
: FILING DATE: 04-APR-1988
: ATTORNEY/AGENT INFORMATION:
: NAME: Seldman, Stephanie L.
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; Patent No. 5792846
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: Feldman, Daniel
; APPLICANT: McCue, Ann
; APPLICANT: Brenner, Robert
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND
; METHODS
; NUMBER OF SEQUENCES: 57
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Brown, Martin, Haller & McClain
; STREET: 1660 Union Street
; CITY: San Diego
; STATE: California
; COUNTRY: USA
; ZIP: 92101-2926
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq Version 1.5
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/455,543A
; FILING DATE: May 31, 1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/223,305
; FILING DATE: April 4, 1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/868,354
; FILING DATE: April 10, 1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/745,206
; FILING DATE: 15-AUG-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/620,250
; FILING DATE: 30-NOV-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/482,384
; FILING DATE: 20-FEB-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/603,751
; FILING DATE: 04-APR-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US89/01408
; FILING DATE: 04-APR-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/176,899
; FILING DATE: 04-APR-1988
; ATTORNEY/AGENT INFORMATION:
; NAME: Seidman, Stephanie L.
; REGISTRATION NUMBER: 33,779
; REFERENCE/DOCKET NUMBER: 6362-52517
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619)238-0999
; TELEFAX: (619)238-0062
; INFORMATION FOR SEQ ID NO: 34:
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DB 241 RPYWYIQAASPKDMLILVDVSGVSLGLTKLIRTSVSSEMLETSLDDDDVNVASFNSNAQD 300  
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DB 301 VSCFQHLVQANVRNKKVLKDAVNNTAKGIDTYDKGFSFAFEQLLNYSRANCNKIIML 360  
QY 361 FTDGGEERAQELFNKYNDKKVRFRFVSQHNRYERGPIQMACENKGYIYEIPSGAIR 420  
DB 361 FTDGGEERAQELFNKYNDKKVRFRFVSQHNRYERGPIQMACENKGYIYEIPSGAIR 420  
QY 421 INTOEYLDVGRPMYLAGDKAQVQWNTNVLDALEGLVITGTLFPVFNITGQFENKTNLK 480  
DB 421 INTOEYLDVGRPMYLAGDKAQVQWNTNVLDALEGLVITGTLFPVFNITGQFENKTNLK 480  
QY 481 NOLILGVNGVDVSLDIKRLTPRFLCPNGYFFAIDPNGYVLLHNPKNPKSOEPTVL 540  
DB 481 NOLILGVNGVDVSLDIKRLTPRFLCPNGYFFAIDPNGYVLLHNPKNPKSOEPTVL 540  
QY 541 DFLDALENDIKVEIRNKMIDGSEKTRFLVKSDERYIDKGNRTYTPVNGTDYSL 600  
DB 541 DFLDALENDIKVEIRNKMIDGSEKTRFLVKSDERYIDKGNRTYTPVNGTDYSL 600  
QY 601 ALVLPYTFYIIKAKLEETITQARSKKGMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660  
DB 601 ALVLPYTFYIIKAKLEETITQARSKKGMKDSETLKPDNFEESGYTFIAPRDYCNDLKI 660  
QY 661 SONNTEFLILNNEFIDRKTNPNSCNADLINRVLLDAGFTNELVQYWSKOKNKGVKAR 720  
DB 661 SONNTEFLILNNEFIDRKTNPNSCNADLINRVLLDAGFTNELVQYWSKOKNKGVKAR 720  
QY 721 FVYTDGGITRVYKPEAGENWQENPTYEDSFYKRSLDNDNVFTAPYFNKSGPGAYESGI 780  
DB 721 FVYTDGGITRVYKPEAGENWQENPTYEDSFYKRSLDNDNVFTAPYFNKSGPGAYESGI 780  
QY 781 MYSKAVEIYIOGKLLKPAVGIKIDVNSWIENFTKTSIRDPGAGVPCDCKRNSDVMDCVI 840  
DB 781 MYSKAVEIYIOGKLLKPAVGIKIDVNSWIENFTKTSIRDPGAGVPCDCKRNSDVMDCVI 840  
QY 841 LDDGFFLLMANHDDYTNOIGRFFGIDPSLMRHLNYSIYAFNKSYSYQSVCEPGAAPKQ 900  
DB 841 LDDGFFLLMANHDDYTNOIGRFFGIDPSLMRHLNYSIYAFNKSYSYQSVCEPGAAPKQ 900  
QY 901 GAGHSAYVPSVADILQIGWATAAASILQOFLLSLFPALLEAVEMDDFTASLSKQ 960  
DB 901 GAGHSAYVPSVADILQIGWATAAASILQOFLLSLFPALLEAVEMDDFTASLSKQ 960  
QY 961 SCITBOTQYFFDNDKSGVLDGNCNKRIFHGEKLMNTNIFIMVESKGCPCDTRILLI 1020  
DB 961 SCITBOTQYFFDNDKSGVLDGNCNKRIFHGEKLMNTNIFIMVESKGCPCDTRILLI 1020  
QY 1021 QAEQTSQDGNPCDMVK 1036  
DB 1021 QAEQTSQDGNPCDMVK 1036

RESULT 2  
US-08-455-543A-52  
; Sequence 52, Application US/08455543A

; Patent No. 5792846  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FastSeq Version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/455,543A  
; FILING DATE: May 31, 1995  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/223,305  
; FILING DATE: April 4, 1994  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/868,354  
; FILING DATE: April 10, 1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/620,250  
; FILING DATE: 30-NOV-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/482,384  
; FILING DATE: 20-FEB-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/US89/01408  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/176,899  
; FILING DATE: 04-APR-1988  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 6362-52517  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 52:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1091 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FRAGMENT TYPE: internal  
; US-08-455-543A-52

Query Match 100.0%; Score 5443; DB 1; Length 1091;  
Best Local Similarity 100.0%; Pred. No. 0;  
Matches 1036; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MAAGCLLALTTLFQSLIGPSSPEPPPSAVTIKSWVDKMQEDLVTLAKTAGVNLVDI 60

Db 1 MAAGCLLALTTLTFLQSLIGSSSEPPFSATYIKSWDKMOEDLVTLAKTAGVNLVDI 60  
Qy 61 YEKYQDLTYVEPNARQVLAARIEKLLSNRSKALVSLALEAEKVQAAHOWREDFASN 120  
Db 61 YEKYQDLTYVEPNARQVLAARIEKLLSNRSKALVSLALEAEKVQAAHOWREDFASN 120  
Qy 121 EYVYNAKDDLDPEKNDSEPSQRIKPVFIEDANFGROISYOHAAVHIPTDIYEGSTIVL 180  
Db 121 EYVYNAKDDLDPEKNDSEPSQRIKPVFIEDANFGROISYOHAAVHIPTDIYEGSTIVL 180  
Qy 181 NELNWTSSALDEVFKKNREDESLWQVFGSATGLARYYPASPWDNSRTPKNKIDLYDVR 240  
Db 181 NELNWTSSALDEVFKKNREDESLWQVFGSATGLARYYPASPWDNSRTPKNKIDLYDVR 240  
Qy 241 RPWYIQAASPKDMLILVDVSGVSGTLKLRISVSEMLETSLDDDDVNVASFNQAQD 300  
Db 241 RPWYIQAASPKDMLILVDVSGVSGTLKLRISVSEMLETSLDDDDVNVASFNQAQD 300  
Qy 301 VSCFOHLVQANVRNKKVLUKDAVNNTAKGITYDKKGFSAFEQQLLNVSRANCKNIIML 360  
Db 301 VSCFOHLVQANVRNKKVLUKDAVNNTAKGITYDKKGFSAFEQQLLNVSRANCKNIIML 360  
Qy 361 FTDGGEERAQEFNKYKNDKVRFRFSVGOHNYERGPQMACENKGYIYIPIGSAIR 420  
Db 361 FTDGGEERAQEFNKYKNDKVRFRFSVGOHNYERGPQMACENKGYIYIPIGSAIR 420  
Qy 421 INTQBYLDVLRPMVLAGDKAQVQWTVNYLDALGLVITGTLVPVFNITQGFENKTNLK 480  
Db 421 INTQBYLDVLRPMVLAGDKAQVQWTVNYLDALGLVITGTLVPVFNITQGFENKTNLK 480  
Qy 481 NQLILGVMGVDSLEBIDKRLPRFTLCPNGYIFAIDPNGYVLLHPNLOPKNPKSOEPTVL 540  
Db 481 NQLILGVMGVDSLEBIDKRLPRFTLCPNGYIFAIDPNGYVLLHPNLOPKNPKSOEPTVL 540  
Qy 541 DFLDALENDLKVEIRNKMIDGSEKFTRLVKSDERYIDKGNRTYTPTVNGTDYSL 600  
Db 541 DFLDALENDLKVEIRNKMIDGSEKFTRLVKSDERYIDKGNRTYTPTVNGTDYSL 600  
Qy 601 ALVLPYTFYIYKAKLETTIQAQSKKMKMDSETLKPDPNFEESGYTFIAPRDCNDLKI 660  
Db 601 ALVLPYTFYIYKAKLETTIQAQSKKMKMDSETLKPDPNFEESGYTFIAPRDCNDLKI 660  
Qy 661 SDNTEFLNNEFIDRKTNPNSCNADLINRVLDAGFTNELVQYWSKQKNIKGVKAR 720  
Db 661 SDNTEFLNNEFIDRKTNPNSCNADLINRVLDAGFTNELVQYWSKQKNIKGVKAR 720  
Qy 721 FVVTDDGTRVYKPEAGENWQENPETEYDSFKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
Db 721 FVVTDDGTRVYKPEAGENWQENPETEYDSFKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
Qy 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSWIEFTKTSIRDPGAGVPCDKRNSDVMDCVI 840  
Db 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSWIEFTKTSIRDPGAGVPCDKRNSDVMDCVI 840  
Qy 841 LDDGGFLMANHDDYTNOIGRFFGEIDPSLMRHLNVISVAFNKSIDYQSYCEPAAFKQ 900  
Db 841 LDDGGFLMANHDDYTNOIGRFFGEIDPSLMRHLNVISVAFNKSIDYQSYCEPAAFKQ 900  
Qy 901 GAGHSAYVPSVADILQIGWATAAASILQOFLLSLTFPRLLEAVENEDDFTASLSKQ 960  
Db 901 GAGHSAYVPSVADILQIGWATAAASILQOFLLSLTFPRLLEAVENEDDFTASLSKQ 960  
Qy 961 SCITEQTOYFFDNDKSPSGVLDGNCNSRIFHGEKLMNTNLIIFIMVESKGCPCDTRLLI 1020  
Db 961 SCITEQTOYFFDNDKSPSGVLDGNCNSRIFHGEKLMNTNLIIFIMVESKGCPCDTRLLI 1020  
Qy 1021 QAEQTSQDGNPCDMVK 1036  
Db 1021 QAEQTSQDGNPCDMVK 1036

RESULT 3

US-08-223-305C-52  
; Sequence 52, Application US/08223305C  
; Patent No. 5851824  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FastSeq Version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/223.305C  
; FILING DATE: April 4, 1994  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/868,354  
; FILING DATE: April 10, 1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/620,250  
; FILING DATE: 30-NOV-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/482,384  
; FILING DATE: 20-FEB-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/US89/01408  
; FILING DATE: 04-APR-1989  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 52516 (P519739)  
; TELEPHONE: (619)238-0099  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 52:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1091 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FRAGMENT TYPE: internal  
US-08-223-305C-52

Query Match 100.0%; Score 5443; DB 2; Length 1091;  
Best Local Similarity 100.0%; Pred. No. 0;  
Matches 1036; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MAAGCLLALTTLTFLQSLIGSSSEPPFSATYIKSWDKMOEDLVTLAKTAGVNLVDI 60  
|||||

Db 1 MAAGCLLALTTLTFLQSLIGPSSEPPPSAVTIKSWDKMQEDLVTLAKTAGVGNQLYDI 60  
QY 61 YEKYQDLYTVENPNARQVLAARDIEKLLNSRKALVSLALEAEKVQAAHQRWEDFASN 120  
Db 61 YEKYQDLYTVENPNARQVLAARDIEKLLNSRKALVSLALEAEKVQAAHQRWEDFASN 120  
QY 121 EVVYNKADDDLDPEKNDSEPSQRIKPVFIEDANFGROISYQHAHVHIPTDIYEGSTIVL 180  
Db 121 EVVYNKADDDLDPEKNDSEPSQRIKPVFIEDANFGROISYQHAHVHIPTDIYEGSTIVL 180  
QY 181 NELNWTSSALDEVFKKNNREDEPSLLWQVFGSATGLARYYPASPVWDSNRTPNKIDLYDVR 240  
Db 181 NELNWTSSALDEVFKKNNREDEPSLLWQVFGSATGLARYYPASPVWDSNRTPNKIDLYDVR 240  
QY 241 RPWYIQGAASPKDMLILVDVSGVSGSLTKLIRTSVSEMLETSLDDDDFVNVASFNSAQD 300  
Db 241 RPWYIQGAASPKDMLILVDVSGVSGSLTKLIRTSVSEMLETSLDDDDFVNVASFNSAQD 300  
QY 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGIDYKKGFSAFEQQLINYNVSRANCKIIML 360  
Db 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGIDYKKGFSAFEQQLINYNVSRANCKIIML 360  
QY 361 FTDGGEERAQELFNKYNKDKKVRFRFSGVGHYERGIQMACENKGYIYEIPSGAIR 420  
Db 361 FTDGGEERAQELFNKYNKDKKVRFRFSGVGHYERGIQMACENKGYIYEIPSGAIR 420  
QY 421 INTQEYLDVLRPMVLAGDKAKQVQWTVNVDALGLVITGTLFVFNITGQFENKTNLK 480  
Db 421 INTQEYLDVLRPMVLAGDKAKQVQWTVNVDALGLVITGTLFVFNITGQFENKTNLK 480  
QY 481 NQLILGVGVDSLEDIKRLPRFTLCPCNGYFAIDPNGYVLLHPNLOPKPKSOEPTVL 540  
Db 481 NQLILGVGVDSLEDIKRLPRFTLCPCNGYFAIDPNGYVLLHPNLOPKPKSOEPTVL 540  
QY 541 DFLDAELNDIKVEIRNKMIDGSEKFTRLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600  
Db 541 DFLDAELNDIKVEIRNKMIDGSEKFTRLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600  
QY 601 ALVLPYTFYIKAKLEETITQARSKKGMKMDSETLKPDPNFEESGYTFIAPRDYCNLDKI 660  
Db 601 ALVLPYTFYIKAKLEETITQARSKKGMKMDSETLKPDPNFEESGYTFIAPRDYCNLDKI 660  
QY 661 SDNTEFLINNEFTDRKTPNPNPCNADLINRVLLDAGFTNELVQNYWSKOKNIKGVKAR 720  
Db 661 SDNTEFLINNEFTDRKTPNPNPCNADLINRVLLDAGFTNELVQNYWSKOKNIKGVKAR 720  
QY 721 FVYTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNVFTAPYFNKSGPGAYESGI 780  
Db 721 FVYTDGGITRVYPKEAGENWQENPETYEDSFYKRSLDNDNVFTAPYFNKSGPGAYESGI 780  
QY 781 MYSKAVEIYIOGKLKPAVVGKIDVNSWIENFTKTSIRDPKAGVPCCKRNSDVMDCVI 840  
Db 781 MYSKAVEIYIOGKLKPAVVGKIDVNSWIENFTKTSIRDPKAGVPCCKRNSDVMDCVI 840  
QY 841 LDGGFLLMANHDDYTNOIGRFFGEBIDPSLMRHLNIVSVYAFNKSIDYQSCVCEPGAAPKQ 900  
Db 841 LDGGFLLMANHDDYTNOIGRFFGEBIDPSLMRHLNIVSVYAFNKSIDYQSCVCEPGAAPKQ 900  
QY 901 GAGHSATVPSVADILQIGWATAAASILQOFLLSLFPRLLEAVENEDDDFTASLSKQ 960  
Db 901 GAGHSATVPSVADILQIGWATAAASILQOFLLSLFPRLLEAVENEDDDFTASLSKQ 960  
QY 961 SCITEQOTYFFDNDKSFSGVLDGNCNKRIFPHGEKLMNTNLIIFINVESKGCPCDTRLLI 1020  
Db 961 SCITEQOTYFFDNDKSFSGVLDGNCNKRIFPHGEKLMNTNLIIFINVESKGCPCDTRLLI 1020  
QY 1021 QAEQTSDEGNPCDMVK 1036  
Db 1021 QAEQTSDEGNPCDMVK 1036

RESULT 4

US-08-311-363-25

; Sequence 25, Application US/08311363  
; Patent No. 5876958  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: Human Calcium Channel Compositions and  
; TITLE OF INVENTION: Methods  
; NUMBER OF SEQUENCES: 32  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Hallier & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patentin Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/311,363  
; FILING DATE:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 6362-51506  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 25:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1091 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; US-08-311-363-25

Query Match 100.0%; Score 5443; DB 2; Length 1091;  
Best Local Similarity 100.0%; Pred. No. 0;  
Matches 1036; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MAAGCLLALTTLTFLQSLIGPSSEPPPSAVTIKSWDKMQEDLVTLAKTAGVGNQLYDI 60  
Db 1 MAAGCLLALTTLTFLQSLIGPSSEPPPSAVTIKSWDKMQEDLVTLAKTAGVGNQLYDI 60  
QY 61 YEKYQDLYTVENPNARQVLAARDIEKLLNSRKALVSLALEAEKVQAAHQRWEDFASN 120  
Db 61 YEKYQDLYTVENPNARQVLAARDIEKLLNSRKALVSLALEAEKVQAAHQRWEDFASN 120  
QY 121 EVVYNKADDDLDPEKNDSEPSQRIKPVFIEDANFGROISYQHAHVHIPTDIYEGSTIVL 180  
Db 121 EVVYNKADDDLDPEKNDSEPSQRIKPVFIEDANFGROISYQHAHVHIPTDIYEGSTIVL 180  
QY 181 NELNWTSSALDEVFKKNNREDEPSLLWQVFGSATGLARYYPASPVWDSNRTPNKIDLYDVR 240  
Db 181 NELNWTSSALDEVFKKNNREDEPSLLWQVFGSATGLARYYPASPVWDSNRTPNKIDLYDVR 240  
QY 241 RPWYIQGAASPKDMLILVDVSGVSGSLTKLIRTSVSEMLETSLDDDDFVNVASFNSAQD 300  
Db 241 RPWYIQGAASPKDMLILVDVSGVSGSLTKLIRTSVSEMLETSLDDDDFVNVASFNSAQD 300  
QY 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGIDYKKGFSAFEQQLINYNVSRANCKIIML 360  
Db 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGIDYKKGFSAFEQQLINYNVSRANCKIIML 360





Db 721 FVTDGGITRVYPKEAGENWQENPETYEDSYKRSKSLDNDNVFTAPYFNKSGPGAYESGI 780  
Qy 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSWIENFTKTSIRDPCAGPVCDCCKRNSDVMDCVI 840  
Db 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSWIENFTKTSIRDPCAGPVCDCCKRNSDVMDCVI 840  
Qy 841 LDGCGFLLMANHDDYTNOIGRFFGEIDPSLMRHLVNIISVYAFNKSIDYQSVCEPGAAPKQ 900  
Db 841 LDGCGFLLMANHDDYTNOIGRFFGEIDPSLMRHLVNIISVYAFNKSIDYQSVCEPGAAPKQ 900  
Qy 901 GAGHRSAYVPSVADILQIGWATAAASILQOFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960  
Db 901 GAGHRSAYVPSVADILQIGWATAAASILQOFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960  
Qy 961 SCITEQTYFFDNDKSKFSVGLDCGNCRSRIFHGKLMNTNLIIFIMVESKGTCPDTRLLI 1020  
Db 961 SCITEQTYFFDNDKSKFSVGLDCGNCRSRIFHGKLMNTNLIIFIMVESKGTCPDTRLLI 1020  
Qy 1021 QAEQTS DGNPCDMVK 1036  
Db 1021 QAEQTS DGNPCDMVK 1036

RESULT 6

US-09-452-007-4  
; Sequence 4, Application US/09452007  
; Patent No. 6140485  
; GENERAL INFORMATION:  
; APPLICANT: Franco, Rodrigo  
; APPLICANT: Sun Chen, Ai Ru  
; APPLICANT: Suey, David J.  
; TITLE OF INVENTION: NUCLEIC ACID ENCODING HUMAN NEURONAL  
; TITLE OF INVENTION: CALCIUM CHANNEL SUBUNITS  
; NUMBER OF SEQUENCES: 6  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.  
; STREET: Two Militia Drive  
; CITY: Lexington  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 02173-4799  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent in Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/452,007  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/08/713,118  
; FILING DATE: 16-SEP-1996  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Mata, Elizabeth W.  
; REGISTRATION NUMBER: 38,236  
; REFERENCE/DOCKET NUMBER: ACC96-01  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 617-861-6240  
; TELEFAX: 617-861-9540  
; INFORMATION FOR SEQ ID NO: 4:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1091 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein

Query Match 99.9%; Score 5439; DB 4; Length 1091;  
Best Local Similarity 99.9%; Pred. No. 0;  
Matches 1035; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 MAACCLLALTLTLFQSLLLIGPSSSEPPPSAVTIKSWDKMOEDLVTLAKTAGSGVNLVDI 60  
Db 1 MAACCLLALTLTLFQSLLLIGPSSSEPPPSAVTIKSWDKMOEDLVTLAKTAGSGVNLVDI 60  
Qy 61 YEKQDLYTVPNNARQIVETAARDIEKLSNRSKALVSALAEKVAQAAHQWREDFASN 120  
Db 61 YEKQDLYTVPNNARQIVETAARDIEKLSNRSKALVSALAEKVAQAAHQWREDFASN 120  
Qy 121 EVVYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGQISYQHAHVHPTDIYEGSTIVL 180  
Db 121 EVVYNAKDDLDPEKNDSEPGSQRIKPVFIEDANFGQISYQHAHVHPTDIYEGSTIVL 180  
Qy 181 NELNWT SALDEVFKKNEEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVR 240  
Db 181 NELNWT SALDEVFKKNEEDPSLLWQVFGSATGLARYYPASPWVDNSRTPNKIDLYDVR 240  
Qy 241 RPWYIOGAASPDKMLILVDYSGSVSGLTLKLIPTSVSEMLETSLDDDFVNVASFNSNAQD 300  
Db 241 RPWYIOGAASPDKMLILVDYSGSVSGLTLKLIPTSVSEMLETSLDDDFVNVASFNSNAQD 300  
Qy 301 VSCFOHLVQANVRNKKVYLDVANNITAKGIDYKKGFSFAFEQLLNYSRANCNKIIML 360  
Db 301 VSCFOHLVQANVRNKKVYLDVANNITAKGIDYKKGFSFAFEQLLNYSRANCNKIIML 360  
Qy 361 FTGGEERAQEIFNKYNKDKKVRVRFESVQGHNYERGIQWMACENKGYIYEIPSGAIR 420  
Db 361 FTGGEERAQEIFNKYNKDKKVRVRFESVQGHNYERGIQWMACENKGYIYEIPSGAIR 420  
Qy 421 INTOEYLDVLGRPMVLADGKAKQVQWNTNVLDALDELGLVITGLTPVFNITQGFENKTLK 480  
Db 421 INTOEYLDVLGRPMVLADGKAKQVQWNTNVLDALDELGLVITGLTPVFNITQGFENKTLK 480  
Qy 481 NQLILGVMGVDVSLIEDIKRLTPRETLCPNGYIFADPNGYVLLHPNLPKPKSQEPVTL 540  
Db 481 NQLILGVMGVDVSLIEDIKRLTPRETLCPNGYIFADPNGYVLLHPNLPKPKSQEPVTL 540  
Qy 541 DFLDAELNDIKVEIRNKMIDGESGKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600  
Db 541 DFLDAELNDIKVEIRNKMIDGESGKTFRTLVKSQDERYIDKGNRTYTWTPVNGTDYSL 600  
Qy 601 ALVLPYTFYIYKAKLEETITQARSKGKMKDSETLAPDNFEESGYTFIAPRDYCNDLKI 660  
Db 601 ALVLPYTFYIYKAKLEETITQARSKGKMKDSETLAPDNFEESGYTFIAPRDYCNDLKI 660  
Qy 661 SDNTEFLNFEIDRKTNNPNSCNADLINRVLLDAGFTNELVQWYWSKQKNIKGVKAR 720  
Db 661 SDNTEFLNFEIDRKTNNPNSCNADLINRVLLDAGFTNELVQWYWSKQKNIKGVKAR 720  
Qy 721 FVTDGGITRVYPKEAGENWQENPETYEDSYKRSKSLDNDNVFTAPYFNKSGPGAYESGI 780  
Db 721 FVTDGGITRVYPKEAGENWQENPETYEDSYKRSKSLDNDNVFTAPYFNKSGPGAYESGI 780  
Qy 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSWIENFTKTSIRDPCAGPVCDCCKRNSDVMDCVI 840  
Db 781 MYSKAVEIYIOGKLLKPAVVGKIDVNSWIENFTKTSIRDPCAGPVCDCCKRNSDVMDCVI 840  
Qy 841 LDGCGFLLMANHDDYTNOIGRFFGEIDPSLMRHLVNIISVYAFNKSIDYQSVCEPGAAPKQ 900  
Db 841 LDGCGFLLMANHDDYTNOIGRFFGEIDPSLMRHLVNIISVYAFNKSIDYQSVCEPGAAPKQ 900  
Qy 901 GAGHRSAYVPSVADILQIGWATAAASILQOFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960  
Db 901 GAGHRSAYVPSVADILQIGWATAAASILQOFLLSLTFPRLLEAVEMEDDDFTASLSKQ 960  
Qy 961 SCITEQTYFFDNDKSKFSVGLDCGNCRSRIFHGKLMNTNLIIFIMVESKGTCPDTRLLI 1020  
Db 961 SCITEQTYFFDNDKSKFSVGLDCGNCRSRIFHGKLMNTNLIIFIMVESKGTCPDTRLLI 1020  
Qy 1021 QAEQTS DGNPCDMVK 1036  
Db 1021 QAEQTS DGNPCDMVK 1036

RESULT 7  
US-08-543A-54  
Sequence 54, Application US/0845543A  
Patent No. 5792846  
GENERAL INFORMATION:  
APPLICANT: Harpold, Michael  
APPLICANT: Ellis, Steven  
APPLICANT: Williams, Mark  
APPLICANT: Feldman, Daniel  
APPLICANT: McCue, Ann  
APPLICANT: Brenner, Robert  
TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
TITLE OF INVENTION: METHODS  
NUMBER OF SEQUENCES: 57  
CORRESPONDENCE ADDRESS:  
ADDRESSER: Brown, Martin, Haller & McClain  
STREET: 1660 Union Street  
CITY: San Diego  
STATE: California  
COUNTRY: USA  
ZIP: 92101-2926  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/455,543A  
FILING DATE: May 31, 1995  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/223,305  
FILING DATE: April 4, 1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620,250  
FILING DATE: 30-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/482,384  
FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 6362-52517  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 54:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1086 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FRAGMENT TYPE: internal  
US-08-455-543A-54

Query Match 99.3%; Score 5403.5; DB 1; Length 1086;

Best Local Similarity 99.5%; Pred. No. 0;  
Matches 1031; Conservative 0; Mismatches 0; Indels 5; Gaps 1;  
QY 1 MAAGCLLALTTLTFLFOSLLIGPSSEPPFPSPAVTIKSWDKMOEDLVTLAKTASGVNOLVDI 60  
DB 1 MAAGCLLALTTLTFLFOSLLIGPSSEPPFPSPAVTIKSWDKMOEDLVTLAKTASGVNOLVDI 60  
QY 61 YEKYQDLYTVEPNARQLVEIAARDIEKLLSNRKSALVSLALEAEKVQAAHOREDFASN 120  
DB 61 YEKYQDLYTVEPNARQLVEIAARDIEKLLSNRKSALVSLALEAEKVQAAHOREDFASN 120  
QY 121 EYVYNAKDDLDPEKNDSEPSQSORTKPVFIEDANFGRQISYQHAHVHPTDIYEGSTIVL 180  
DB 121 EYVYNAKDDLDPEKNDSEPSQSORTKPVFIEDANFGRQISYQHAHVHPTDIYEGSTIVL 180  
QY 181 NELNMTSALDEYFVKKNREEDPSLLMQVFGSATGLARIYPASPWVDNSRTPNKIDLDVDRR 240  
DB 181 NELNMTSALDEYFVKKNREEDPSLLMQVFGSATGLARIYPASPWVDNSRTPNKIDLDVDRR 240  
QY 241 RPWYIQGAASPKDMLILVDVSGVSGLTCLKLIRTSVSEMLETSLDDDFNVASFNSNAQD 300  
DB 241 RPWYIQGAASPKDMLILVDVSGVSGLTCLKLIRTSVSEMLETSLDDDFNVASFNSNAQD 300  
QY 301 VSCFOHLVQANVRNKKVLDVANNITAKGIDYKKGFSFAFEOQLLNNVSRANCKIIML 360  
DB 301 VSCFOHLVQANVRNKKVLDVANNITAKGIDYKKGFSFAFEOQLLNNVSRANCKIIML 360  
QY 361 FTDGGEERAQEIFNKYKNDKVKYRFRFSVQGHNYERGPQIOWMACENKGYIYEIPSGAIR 420  
DB 361 FTDGGEERAQEIFNKYKNDKVKYRFRFSVQGHNYERGPQIOWMACENKGYIYEIPSGAIR 420  
QY 421 INTQEYLDVLRPMVLGADKAKOVQNTNYLDLELGLVITGTLPVFNITGQFENKTNLK 480  
DB 421 INTQEYLDVLRPMVLGADKAKOVQNTNYLDLELGLVITGTLPVFNITGQFENKTNLK 480  
QY 481 NQLILGVMGVDVSLDKRLTFRFTLCPNGYFAIDPNGVYLLHPLNLPKPSQBPVTL 540  
DB 481 NQLILGVMGVDVSLDKRLTFRFTLCPNGYFAIDPNGVYLLHPLNLPKPSQBPVTL 540  
QY 541 DFLDAELENDIKVEIRNKMIDGESGKERTLVKSQDERYIDKGNRTYTWTPVNGDYSL 600  
DB 541 DFLDAELENDIKVEIRNKMIDGESGKERTLVKSQDERYIDKGNRTYTWTPVNGDYSL 600  
QY 601 ALVLPYTFYIIKAKLEETITQARSKKGMKDSSETLKPONFEESGYTFTIAPROYCNDLKI 660  
DB 596 ALVLPYTFYIIKAKLEETITQARSKKGMKDSSETLKPONFEESGYTFTIAPROYCNDLKI 655  
QY 661 SDNTEFLNFEFIDRKTPNPNPCNADLINRVLLDAGFTNELVQYWSKQKNIKGVKAR 720  
DB 656 SDNTEFLNFEFIDRKTPNPNPCNADLINRVLLDAGFTNELVQYWSKQKNIKGVKAR 715  
QY 721 FVYTDGGITRVYPKEAGENQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
DB 716 FVYTDGGITRVYPKEAGENQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 775  
QY 781 MYSKAVEIYIQGKLLKPAVVGKIDVNSIENFTKTSIRDPCAGPVCDCRNSDVMDCVI 840  
DB 776 MYSKAVEIYIQGKLLKPAVVGKIDVNSIENFTKTSIRDPCAGPVCDCRNSDVMDCVI 835  
QY 841 LDDGGELLMANHDDYTNOIGRFGEDIDPSLMRHLVNIYSYAFNKSVDYQSVCEPQAPKQ 900  
DB 836 LDDGGELLMANHDDYTNOIGRFGEDIDPSLMRHLVNIYSYAFNKSVDYQSVCEPQAPKQ 895  
QY 901 GAGHRSAYVPSVADILQIGWATAAAWSILQOFLLSLTFPRILLEAVEMEDDDFTASLSKQ 960  
DB 896 GAGHRSAYVPSVADILQIGWATAAAWSILQOFLLSLTFPRILLEAVEMEDDDFTASLSKQ 955  
QY 961 SCITEQTYFFDNDKSKFSGLVDCGNCRSIFHGEKLMNTNLIFIMVESKTCPCDTRLLI 1020  
DB 956 SCITEQTYFFDNDKSKFSGLVDCGNCRSIFHGEKLMNTNLIFIMVESKTCPCDTRLLI 1015  
QY 1021 QAEQTSDDGNPCDMVK 1036  
|||||



RESULT 9  
US-08-455-543A-56  
; Sequence 56, Application US/0845543A  
; Patent No. 5792846  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FASTSEQ Version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/455,543A  
; FILING DATE: May 31, 1995  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/223,305  
; FILING DATE: April 4, 1994  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/868,354  
; FILING DATE: April 10, 1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
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; APPLICATION NUMBER: US 07/620,250  
; FILING DATE: 30-NOV-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/482,384  
; FILING DATE: 20-FEB-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/US89/01408  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/176,899  
; FILING DATE: 04-APR-1988  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 6362-52517  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 56:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1084 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FRAGMENT TYPE: internal  
US-08-455-543A-56

Query Match 99.0%; Score 5386.5; DB 1; Length 1084;  
Best Local Similarity 99.2%; Pred. No. 0;  
Matches 1028; Conservative 0; Mismatches 1; Indels 7; Gaps 1;  
QY 1 MAAGCLLALTTLTFLFOSLLIGPSSEEPFSAVTIKSWDKMQEDLVTLAKTASGVNOLVDI 60  
DB 1 MAAGCLLALTTLTFLFOSLLIGPSSEEPFSAVTIKSWDKMQEDLVTLAKTASGVNOLVDI 60  
QY 61 YEKYQDLYTVEPNNAARQLVEIAARDIEKLLSNRKSALVSLALEAEKVQAAHOREDFASN 120  
DB 61 YEKYQDLYTVEPNNAARQLVEIAARDIEKLLSNRKSALVSLALEAEKVQAAHOREDFASN 120  
QY 121 EYVYNAKDDLDPEKNDSEPGSORIKPVFIEDANFCROISYOHAAVHIPTDIIYEGSTIVL 180  
DB 121 EYVYNAKDDLDPEKNDSEPGSORIKPVFIEDANFCROISYOHAAVHIPTDIIYEGSTIVL 180  
QY 181 NELNMTSALDEVFKKNREEDPSLLMQVFGSATGLARYYPASPWVDSRTPNPKIDLDVDRR 240  
DB 181 NELNMTSALDEVFKKNREEDPSLLMQVFGSATGLARYYPASPWVDSRTPNPKIDLDVDRR 240  
QY 241 RPWYIQGAASPKDMLILVDVSGVSGTLTKLIRTSYSEMLETLSDDDFNVASFNSNAOD 300  
DB 241 RPWYIQGAASPKDMLILVDVSGVSGTLTKLIRTSYSEMLETLSDDDFNVASFNSNAOD 300  
QY 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGIDYKKGFSFAFQOLLNYSRANCNKIIML 360  
DB 301 VSCFQHLVQANVRNKKVLDKAVNNITAKGIDYKKGFSFAFQOLLNYSRANCNKIIML 360  
QY 361 FTDGGEERAQEIFNKYKDKVRFVFSVQGHYERGPQIOWMACENKGYIYEPSIGAIR 420  
DB 361 FTDGGEERAQEIFNKYKDKVRFVFSVQGHYERGPQIOWMACENKGYIYEPSIGAIR 420  
QY 421 INTQYLDVLGRPMVLGAKQVQWNTNYLDALGLVITGTLPVFNITGOFENKTNLK 480  
DB 421 INTQYLDVLGRPMVLGAKQVQWNTNYLDALGLVITGTLPVFNITGOFENKTNLK 480  
QY 481 NQLIILGVMGVDVSLDIKRLTFRFTLCPNGYFAIDPNCYVLLHPNLQPNKPSQEPVTL 540  
DB 481 NQLIILGVMGVDVSLDIKRLTFRFTLCPNGYFAIDPNCYVLLHPNLQPNKPSQEPVTL 540  
QY 541 DFLDAELENDEKVEIRNKMIDGESGEKTERTLVKSDERYIDKGNRTYTWTPVNGDYSL 600  
DB 541 DFLDAELENDEKVEIRNKMIDGESGEKTERTLVKSDERYIDKGNRTYTWTPVNGDYSL 600  
QY 601 ALVLPTYSPYIIKALEETITQARSKKGMKDSITLKPDPNFEESSGYTFTAPRDYCNLKI 660  
DB 601 ALVLPTYSPYIIKALEETITQARSKKGMKDSITLKPDPNFEESSGYTFTAPRDYCNLKI 660  
QY 661 SDNTEFLLNFEFIDRKTTPNPNPCNADLINRVLLDAGFTNELVQNYWSKQNIKGVKAR 720  
DB 661 SDNTEFLLNFEFIDRKTTPNPNPCNADLINRVLLDAGFTNELVQNYWSKQNIKGVKAR 720  
QY 721 FVVTGGITRVYPKEAGENQWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
DB 721 FVVTGGITRVYPKEAGENQWQENPETYEDSFYKRSLDNDNYVFTAPYFNKSGPGAYESGI 780  
QY 781 MVSKAVEIYIOGKLLKPAVVGKIDVNSWIENFTKTSIRDPKAGVPCDCKRNSDVMDCVI 840  
DB 781 MVSKAVEIYIOGKLLKPAVVGKIDVNSWIENFTKTSIRDPKAGVPCDCKRNSDVMDCVI 840  
QY 841 LDDGGFLLMANHDDYTNIQIGRFFGEIDPSLMRHLNIVSYAFNKSDYQSVCEPQAPKQ 900  
DB 841 LDDGGFLLMANHDDYTNIQIGRFFGEIDPSLMRHLNIVSYAFNKSDYQSVCEPQAPKQ 900  
QY 901 GAGHRSAYVPSVADILQIGWATAAASWLSLQFLLSLTPRLEAVEMEDDDFTASLSQ 960  
DB 901 GAGHRSAYVPSVADILQIGWATAAASWLSLQFLLSLTPRLEAVEMEDDDFTASLSQ 960  
QY 961 SCITEQTOYFFDNDSKFSVGLDCGNCNCRIFHGEKMLNTNLIIFIMVESKGTCPDTRLLI 1020  
DB 961 SCITEQTOYFFDNDSKFSVGLDCGNCNCRIFHGEKMLNTNLIIFIMVESKGTCPDTRLLI 1020  
QY 1021 QAEQTSDFGNPCDMVK 1036



Db 1014 QAEQTSDBPNPCDMVK 1029

## RESULT 11

US-08-455-543A-53

: Sequence 53, Application US/08455543A

: Patent No. 5792846

## : GENERAL INFORMATION:

: APPLICANT: Harpold, Michael

: APPLICANT: Ellis, Steven

: APPLICANT: Williams, Mark

: APPLICANT: Feldman, Daniel

: APPLICANT: McCue, Ann

: APPLICANT: Brenner, Robert

: TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND

: TITLE OF INVENTION: METHODS

: NUMBER OF SEQUENCES: 57

: CORRESPONDENCE ADDRESS:

: ADDRESSEE: Brown, Martin, Haller &amp; McClain

: STREET: 1660 Union Street

: CITY: San Diego

: STATE: California

: COUNTRY: USA

: ZIP: 92101-2926

: COMPUTER READABLE FORM:

: COMPUTER: IBM Compatible

: OPERATING SYSTEM: DOS

: SOFTWARE: FastSeq Version 1.5

: CURRENT APPLICATION DATA:

: APPLICATION NUMBER: US/08/455,543A

: FILING DATE: May 31, 1995

: PRIORITY APPLICATION DATA:

: APPLICATION NUMBER: 08/223,305

: FILING DATE: April 4, 1994

: PRIORITY APPLICATION DATA:

: APPLICATION NUMBER: 07/868,354

: FILING DATE: April 10, 1992

: PRIORITY APPLICATION DATA:

: APPLICATION NUMBER: US 07/745,206

: FILING DATE: 15-AUG-1991

: PRIORITY APPLICATION DATA:

: APPLICATION NUMBER: US 07/620,250

: FILING DATE: 30-NOV-1990

: PRIORITY APPLICATION DATA:

: APPLICATION NUMBER: US 07/482,384

: FILING DATE: 20-FEB-1990

: PRIORITY APPLICATION DATA:

: APPLICATION NUMBER: US 07/603,751

: FILING DATE: 04-APR-1989

: PRIORITY APPLICATION DATA:

: APPLICATION NUMBER: WO PCT/US89/01408

: FILING DATE: 04-APR-1989

: PRIORITY APPLICATION DATA:

: APPLICATION NUMBER: US 07/176,899

: FILING DATE: 04-APR-1988

: ATTORNEY/AGENT INFORMATION:

: NAME: Seidman, Stephanie L.

: REGISTRATION NUMBER: 33,779

: REFERENCE/DOCKET NUMBER: 6362-52517

: TELEPHONE: (619)238-0999

: TELEFAX: (619)238-0062

: INFORMATION FOR SEQ ID NO: 53:

: SEQUENCE CHARACTERISTICS:

: LENGTH: 1103 amino acids

: TYPE: amino acid

: STRANDEDNESS: single

: TOPOLOGY: linear

: MOLECULE TYPE: protein

: FRAGMENT TYPE: internal

US-08-455-543A-53

Query Match 98.6%; Score 5367; DB 1; Length 1103;  
Best Local Similarity 97.4%; Pred. No. 0;  
Matches 1028; Conservative 0; Mismatches 1; Indels 26; Gaps 2;

QY	1	MAAGCLLALTTLTFLQSLLLGPSSEEPFPPSAVTIKSNWVKMQEDLVLTAKTASGVNQLVDI	60
DB	1	MAAGCLLALTTLTFLQSLLLGPSSEEPFPPSAVTIKSNWVKMQEDLVLTAKTASGVNQLVDI	60
QY	61	YEKYQDLYTVEPNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAARHOREFASN	120
DB	61	YEKYQDLYTVEPNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVQAARHOREFASN	120
QY	121	EVYYNAKDDLDPEKNDSEPGSQRIKPVIEDANFGQISYQHAHVHPTDIYEGSTIVL	180
DB	121	EVYYNAKDDLDPEKNDSEPGSQRIKPVIEDANFGQISYQHAHVHPTDIYEGSTIVL	180
QY	181	NELNWTSAIDVEYFKKREEDPSLLWQVFGSATGLARYYPASPMVDNSRTENKIDLDVDR	240
DB	181	NELNWTSAIDVEYFKKREEDPSLLWQVFGSATGLARYYPASPMVDNSRTENKIDLDVDR	240
QY	241	RPWYIQGAASPKDMLILVDVSGVSGITLKLIRTSVSEMLETSLDSDDFVNVASFNSNAQD	300
DB	241	RPWYIQGAASPKDMLILVDVSGVSGITLKLIRTSVSEMLETSLDSDDFVNVASFNSNAQD	300
QY	301	VSCFQHLVQANVRNKKVLDKAVNNITAKGITYKKGFSAFEOLLNYSRANCNKIIML	360
DB	301	VSCFQHLVQANVRNKKVLDKAVNNITAKGITYKKGFSAFEOLLNYSRANCNKIIML	360
QY	361	FTDGGEEAQQEIFNKYNKDKKVRVFRFSYGOHNYRGPIOMMACENKGYYYEIPSGAIR	420
DB	361	FTDGGEEAQQEIFNKYNKDKKVRVFRFSYGOHNYRGPIOMMACENKGYYYEIPSGAIR	420
QY	421	INTQEYLDVLRPMVLGADKAKOVQNTVYLDALGLVITGTLPVFNITQGFENKTNLX	480
DB	421	INTQEYLDVLRPMVLGADKAKOVQNTVYLDALGLVITGTLPVFNITQGFENKTNLX	480
QY	481	NOLILGVMGVDSLEDIKRLTPRTLCPNGYYFAIDPNGVYLLHPLNLPK-----530	540
DB	481	NOLILGVMGVDSLEDIKRLTPRTLCPNGYYFAIDPNGVYLLHPLNLPK-----530	540
QY	531	-----NPKSQEPVTLDFDAELENDIKVEIRKNMIDGEGEKTFTLVKSQERYI	581
DB	541	LRKRRNIQNPKSQEPVTLDFDAELENDIKVEIRKNMIDGEGEKTFTLVKSQERYI	600
QY	582	DGKNRTYTWTPVNGTDYSLALVLPYSFYIYAKLEETITQARSKKGKMDSETLKPDNF	641
DB	601	DGKNRTYTWTPVNGTDYSLALVLPYSFYIYAKLEETITQARSKKGKMDSETLKPDNF	653
QY	642	ESGYTFIAPRDYCNLDKI SDNNTEFLNNEFIDRKTNNPNSCNADLINRVLLDAGFTN	701
DB	654	ESGYTFIAPRDYCNLDKI SDNNTEFLNNEFIDRKTNNPNSCNADLINRVLLDAGFTN	713
QY	702	ELVQNTWSKQKNIKGVKARFVTDGGITRVYPKEAGENQENPETEYDSFYKRSNDNY	761
DB	714	ELVQNTWSKQKNIKGVKARFVTDGGITRVYPKEAGENQENPETEYDSFYKRSNDNY	773
QY	762	VETAPYFNKSGGAYESGIMVSKAVEIYLOGKLLKPAVVICIKIDVNSWIENFTKTSRDP	821
DB	774	VETAPYFNKSGGAYESGIMVSKAVEIYLOGKLLKPAVVICIKIDVNSWIENFTKTSRDP	833
QY	822	CAGPVCDCRNSDVMDCVILDDGGFLLMANHDDYTQIGRFFGEIDPSPLMRHLVNISVYA	881
DB	834	CAGPVCDCRNSDVMDCVILDDGGFLLMANHDDYTQIGRFFGEIDPSPLMRHLVNISVYA	893
QY	882	FNKSYDYQSVCEPGAAPKOGAGHRSAYVPSVADILQIGWATAAASIIQQFLSLTFPR	941
DB	894	FNKSYDYQSVCEPGAAPKOGAGHRSAYVPSVADILQIGWATAAASIIQQFLSLTFPR	953
QY	942	LLEAVEMEDDDFTASLSKQSCITEQTYQFFDNDKSFSGVLDCGNGSRIFPHGKLMNTNL	1001
DB	954	LLEAVEMEDDDFTASLSKQSCITEQTYQFFDNDKSFSGVLDCGNGSRIFPHGKLMNTNL	1013



QY 1002 IFIMVSKGTCTCDTRLIIQAEQTSQDGNPCDMVK 1036  
Db 1014 IFIMVSKGTCTCDTRLIIQAEQTSQDGNPCDMVK 1048

RESULT 12  
US-08-223-305C-53  
; Sequence 53, Application US/08223305C  
; Patent No. 5851824  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESS: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FASTSEQ version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/223,305C  
; FILING DATE: April 4, 1994  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/868,354  
; FILING DATE: April 10, 1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/620,250  
; FILING DATE: 30-NOV-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/482,384  
; FILING DATE: 20-FEB-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/US89/01408  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/176,899  
; FILING DATE: 04-APR-1988  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 52516 (P519739)  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 53:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1103 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FRAGMENT TYPE: internal  
US-08-223-305C-53

Query Match 98.6%; Score 5367; DB 2; Length 1103;  
Best Local Similarity 97.4%; Pred. No. 0;  
Matches 1028; Conservative 0; Mismatches 1; Indels 26; Gaps 2;

QY 1 MAAGCLLALTLTLFQSLIIGPSSEPPPSAVTIKSWVDKMQEDLVTLAKTAGVGNQLVDI 60  
Db 1 MAAGCLLALTLTLFQSLIIGPSSEPPPSAVTIKSWVDKMQEDLVTLAKTAGVGNQLVDI 60  
QY 61 YEKYQDLYTVEPNARQLVEIAARDIEKLLSNRSKALYSALAEAEKVQAAHQRREDFASN 120  
Db 61 YEKYQDLYTVEPNARQLVEIAARDIEKLLSNRSKALYSALAEAEKVQAAHQRREDFASN 120  
QY 121 EVVYNKDDLDPEKNDSEPGSQRIKPVFIEDANFGROIISYQHAHAVHIPTDIYEGSTIVL 180  
Db 121 EVVYNKDDLDPEKNDSEPGSQRIKPVFIEDANFGROIISYQHAHAVHIPTDIYEGSTIVL 180  
QY 181 NELNWTSAIDVEFKKNREEDPSLLMQVFGSATGLARYYPASPVVDNSRTPNKIDLYDVR 240  
Db 181 NELNWTSAIDVEFKKNREEDPSLLMQVFGSATGLARYYPASPVVDNSRTPNKIDLYDVR 240  
QY 241 RPWYIQGAASPKDMLILVDVSGVSGLTGLKIRTSVSEMLETSLDDDFVNVASFNSNAQD 300  
Db 241 RPWYIQGAASPKDMLILVDVSGVSGLTGLKIRTSVSEMLETSLDDDFVNVASFNSNAQD 300  
QY 301 VSCFQHLVQANVRNKKVYLKDAVNITAKGITDYKKGFSFAFEQLLNNVSRANCNIIML 360  
Db 301 VSCFQHLVQANVRNKKVYLKDAVNITAKGITDYKKGFSFAFEQLLNNVSRANCNIIML 360  
QY 361 FTDGGEERAQEIFNKYNKDKKVRFRFESVGOHNYERGPIONMACENKGYEIPISGAIR 420  
Db 361 FTDGGEERAQEIFNKYNKDKKVRFRFESVGOHNYERGPIONMACENKGYEIPISGAIR 420  
QY 421 INTOEYLDVLGRPMVLADKAKQWNTNVYLDLLEGLVITGTLPVFNITGOFENKTNLK 480  
Db 421 INTOEYLDVLGRPMVLADKAKQWNTNVYLDLLEGLVITGTLPVFNITGOFENKTNLK 480  
QY 481 NQLILGVNGVDVSLIEDIKRLTPRTFLCPNGYFFAIDPNGYVLLHPNLQPK----- 530  
Db 481 NQLILGVNGVDVSLIEDIKRLTPRTFLCPNGYFFAIDPNGYVLLHPNLQPKVGIGPTIN 540  
QY 531 -----NPKSQEPVTLDFDAELENDIKVEIRNKKMIDGESGEKFTLVKSODERYI 581  
Db 541 LRKRPNIQNPKSQEPVTLDFDAELENDIKVEIRNKKMIDGESGEKFTLVKSODERYI 600  
QY 582 DKGRTYTWTPVNGTDYSLALVLPITYSYIIKAKLEETITQARSKKGMKSDSETLKPNF 641  
Db 601 DKGRTYTWTPVNGTDYSLALVLPITYSYIIKAKLEETITQARY-----SETLKPNF 653  
QY 642 EESGYTFIAPRDYCNLDKISDNNTFELNPFNEFIDRKTPNPNPCNADLINRVLLDAGFTN 701  
Db 654 EESGYTFIAPRDYCNLDKISDNNTFELNPFNEFIDRKTPNPNPCNADLINRVLLDAGFTN 713  
QY 702 ELVQYNSKQNKIKGVKARFVVDGITRVYPKEAGENQWNPETEDSFYKRSLDNDNY 761  
Db 714 ELVQYNSKQNKIKGVKARFVVDGITRVYPKEAGENQWNPETEDSFYKRSLDNDNY 773  
QY 762 VFTAPYFNKSGPGAYESGIMVSKAVEIYIOGKLLKPAVVGKIDVNSWIENFTKTSIRDP 821  
Db 774 VFTAPYFNKSGPGAYESGIMVSKAVEIYIOGKLLKPAVVGKIDVNSWIENFTKTSIRDP 833  
QY 822 CAGPVCCCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNIYVA 881  
Db 834 CAGPVCCCKRNSDVMDCVILDDGGFLLMANHDDYTNQIGRFFGEIDPSLMRHLVNIYVA 893  
QY 882 FNKSYDYQSVCEPGAAPKQAGHRSAYVPSVADILQIGWATAAAWSILOQFLLSLTFR 941  
Db 894 FNKSYDYQSVCEPGAAPKQAGHRSAYVPSVADILQIGWATAAAWSILOQFLLSLTFR 953  
QY 942 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDGCGNCSRIFHGEKLMNTNL 1001  
Db 954 LLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDSKSFSGVLDGCGNCSRIFHGEKLMNTNL 1013  
QY 1002 IFIMVSKGTCTCDTRLIIQAEQTSQDGNPCDMVK 1036



Db 1014 IFIMVSKGTCPCDTRLIIQAEQTSDBGPNPCDMVK 1048  
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## RESULT 13

US-08-455-543A-55  
: Sequence 55, Application US/08455543A  
: Patent No. 5792846  
: GENERAL INFORMATION:  
: APPLICANT: Harpold, Michael  
: APPLICANT: Ellis, Steven  
: APPLICANT: Williams, Mark  
: APPLICANT: Feldman, Daniel  
: APPLICANT: McCue, Ann  
: APPLICANT: Brenner, Robert  
: TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
: NUMBER OF SEQUENCES: 57  
: CORRESPONDENCE ADDRESS:  
: ADDRESSEE: Brown, Martin, Haller & McClain  
: STREET: 1660 Union Street  
: CITY: San Diego  
: STATE: California  
: COUNTRY: USA  
: ZIP: 92101-2926  
: COMPUTER READABLE FORM:  
: MEDIUM TYPE: Diskette  
: COMPUTER: IBM Compatible  
: OPERATING SYSTEM: DOS  
: SOFTWARE: FastSeq Version 1.5  
: CURRENT APPLICATION DATA:  
: APPLICATION NUMBER: US/08/455,543A  
: FILING DATE: May 31, 1995  
: PRIOR APPLICATION DATA:  
: APPLICATION NUMBER: 08/223,305  
: FILING DATE: April 4, 1994  
: PRIOR APPLICATION DATA:  
: APPLICATION NUMBER: 07/868,354  
: FILING DATE: April 10, 1992  
: PRIOR APPLICATION DATA:  
: APPLICATION NUMBER: US 07/745,206  
: FILING DATE: 15-AUG-1991  
: PRIOR APPLICATION DATA:  
: APPLICATION NUMBER: US 07/620,250  
: FILING DATE: 30-NOV-1990  
: PRIOR APPLICATION DATA:  
: APPLICATION NUMBER: US 07/482,384  
: FILING DATE: 20-FEB-1990  
: PRIOR APPLICATION DATA:  
: APPLICATION NUMBER: US 07/603,751  
: FILING DATE: 04-APR-1989  
: PRIOR APPLICATION DATA:  
: APPLICATION NUMBER: WO PCT/US89/01408  
: FILING DATE: 04-APR-1989  
: PRIOR APPLICATION DATA:  
: APPLICATION NUMBER: US 07/176,899  
: FILING DATE: 04-APR-1988  
: ATTORNEY/AGENT INFORMATION:  
: NAME: Seidman, Stephanie L.  
: REGISTRATION NUMBER: 33,779  
: REFERENCE/DOCKET NUMBER: 6362-52517  
: TELECOMMUNICATION INFORMATION:  
: TELEPHONE: (619)238-0999  
: TELEFAX: (619)238-0062  
: INFORMATION FOR SEQ ID NO: 55:  
: SEQUENCE CHARACTERISTICS:  
: LENGTH: 1079 amino acids  
: TYPE: amino acid  
: STRANDEDNESS: single  
: TOPOLOGY: linear  
: MOLECULE TYPE: protein  
: FRAGMENT TYPE: internal  
US-08-455-543A-55

Query Match 98.2%; Score 5347; DB 1; Length 1079;  
Best Local Similarity 98.7%; Pred. No. 0;  
Matches 1023; Conservative 0; Mismatches 1; Indels 12; Gaps 2;  
QY 1 MAAGCLLALTLTLFQSLIIQPSSEPPPSAVTIKSWVDKMQEDLVTLAKTASGVNQVLVDI 60  
DB 1 MAAGCLLALTLTLFQSLIIQPSSEPPPSAVTIKSWVDKMQEDLVTLAKTASGVNQVLVDI 60  
QY 61 YEKYQDLTYVEPNARQLVEIARDTEKLLSNRSKALVSLALEAEKVQAAHQRDEFASN 120  
DB 61 YEKYQDLTYVEPNARQLVEIARDTEKLLSNRSKALVSLALEAEKVQAAHQRDEFASN 120  
QY 121 EYVYNAKDDLDPEKNDSEPGSQRIKPVFTEDANFGQISQYHAAVHIPTDIYEGSTIVL 180  
DB 121 EYVYNAKDDLDPEKNDSEPGSQRIKPVFTEDANFGQISQYHAAVHIPTDIYEGSTIVL 180  
QY 181 NELNWTSDALDEVFKKNEEDPSSLQWVFGSATGLARYYPASPWVDSNRTNPKIDLYDVR 240  
DB 181 NELNWTSDALDEVFKKNEEDPSSLQWVFGSATGLARYYPASPWVDSNRTNPKIDLYDVR 240  
QY 241 RPWYIOGAASPDKMLILVDVSGSVGLTLKLIIRTSVSEMLETSLDDDFVNVASFNSNAQD 300  
DB 241 RPWYIOGAASPDKMLILVDVSGSVGLTLKLIIRTSVSEMLETSLDDDFVNVASFNSNAQD 300  
QY 301 VSCFQHLVQANVRNKKVLDVANNITAKGTDYKKKGFSAFEOQLLNYSRANCNKIIML 360  
DB 301 VSCFQHLVQANVRNKKVLDVANNITAKGTDYKKKGFSAFEOQLLNYSRANCNKIIML 360  
QY 361 FTDGGEERAQEIENKYNKDKKVRFRFSVQGHNYERGPQIOMMACENKGYIYEIPSGAIR 420  
DB 361 FTDGGEERAQEIENKYNKDKKVRFRFSVQGHNYERGPQIOMMACENKGYIYEIPSGAIR 420  
QY 421 INTQEYLDVLGRPMVLGADKAKOVNTNVDLDALEGLVLTGLPVENITGQENKTNLK 480  
DB 421 INTQEYLDVLGRPMVLGADKAKOVNTNVDLDALEGLVLTGLPVENITGQENKTNLK 480  
QY 481 NQILGVMGVDVDSLEDIKRLTPRTLCPCNGYIYFAIDPNGYVLLHPNLQPNKPSQEPVTL 540  
DB 481 NQILGVMGVDVDSLEDIKRLTPRTLCPCNGYIYFAIDPNGYVLLHPNLQPNKPSQEPVTL 540  
QY 541 DFLDAELENDIKVEIRNKMIDGESGKFTFTLVKSQDERVIDKGNRTYTWTPVNGTDYSL 600  
DB 541 DFLDAELENDIKVEIRNKMIDGESGKFTFTLVKSQDERVIDKGNRTYTWTPVNGTDYSL 600  
QY 595 ALVLPYTSFYIYKAKLEETITQARSKKGMKDSKTLKPDNFEESGYTFIAPRDCNDLKI 660  
DB 595 ALVLPYTSFYIYKAKLEETITQARSKKGMKDSKTLKPDNFEESGYTFIAPRDCNDLKI 660  
QY 661 SDNTEFLNNEFIDRKTNPNSCNADLINRVLLDAGFTNELVQNTWSKQNKIKGYKAR 720  
DB 661 SDNTEFLNNEFIDRKTNPNSCNADLINRVLLDAGFTNELVQNTWSKQNKIKGYKAR 720  
QY 708 FVYTDGGITRVYKPEAGENQENPETEYDSFYKRSLDNDNYVFTAPYFNKSGGAYESGI 780  
DB 708 FVYTDGGITRVYKPEAGENQENPETEYDSFYKRSLDNDNYVFTAPYFNKSGGAYESGI 780  
QY 768 MYSKAVEIYIQGKLLAPVAVGIKIDVNSWIENFTKTSIRDPACGVCDCRNSDVMDCVI 840  
DB 768 MYSKAVEIYIQGKLLAPVAVGIKIDVNSWIENFTKTSIRDPACGVCDCRNSDVMDCVI 840  
QY 841 LDDGGFLMANHDDYTNQIGRWATAAASWILQOFLSLTTPRLLAEVEMEDDDFTASLSKQ 900  
DB 841 LDDGGFLMANHDDYTNQIGRWATAAASWILQOFLSLTTPRLLAEVEMEDDDFTASLSKQ 900  
QY 888 GAGHRSAYVPSVADILQIGWATAAASWILQOFLSLTTPRLLAEVEMEDDDFTASLSKQ 948  
DB 888 GAGHRSAYVPSVADILQIGWATAAASWILQOFLSLTTPRLLAEVEMEDDDFTASLSKQ 948  
QY 948 SCITEQTYFFDNDSDSKSVGLDCGNCRSIFHGEKLMNTNLIFIMVESKTCPCDTRLLI 1020  
DB 948 SCITEQTYFFDNDSDSKSVGLDCGNCRSIFHGEKLMNTNLIFIMVESKTCPCDTRLLI 1020



QY 1021 QAEQSDGPNPCOMVK 1036  
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Db 1009 QAEQSDGPNPCOMVK 1024

## RESULT 15

US-08-435-675B-5  
; Sequence 5, Application US/08435675B  
; Patent No. 5710250  
; GENERAL INFORMATION:  
; APPLICANT: Ellis, Steven Bradley  
; APPLICANT: Williams, Mark E.  
; APPLICANT: Harpold, Michael Miller  
; APPLICANT: Schwartz, Arnold  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: CALCIUM CHANNEL COMPOSITIONS AND METHODS  
; NUMBER OF SEQUENCES: 6  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: CA  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FastSeq Version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/435,675B  
; FILING DATE: 05-MAY-1995  
; CLASSIFICATION: 435  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 08/314,083  
; FILING DATE: 28-SEP-1994  
; APPLICATION NUMBER: US 07/914,231  
; FILING DATE: 13-JUL-1992  
; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 08-NOV-1990  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 6362-53193  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 619-238-0999  
; TELEFAX: 619-238-0062  
; TELEX:  
; INFORMATION FOR SEQ ID NO: 5:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 1106 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FRAGMENT TYPE: internal  
US-08-435-675B-5

Query Match 96.1%; Score 5229.5; DB 1; Length 1106;  
Best Local Similarity 94.8%; Pred. No. 0;  
Matches 1003; Conservative 14; Mismatches 12; Indels 29; Gaps 4;

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Db 61 DIYEKYQDLTYTEPNARQLVEIAARDIEKLLSNRSKALVSLALEAEKVAQAQHWREDEFA 120  
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Db 121 SNEVYVYNAKDDLDPKNDSEPGSQRIKPFVTDANFRQVQSYQHAHVHIPTDIYEGSTI 180  
QY 179 VLNELNWTLSALDEVEFKNREEDPSLLMQVFGSATGLIARYYPASPWVNSRTPNKIDLYDV 238  
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Db 181 VLNELNWTLSALDDVEFKNREEDPSLLMQVFGSATGLIARYYPASPWVNSRTPNKIDLYDV 240  
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QY 299 ODVSCFOHLVQANVRNKKVLKDAVNNTAKGITDYKKGFSAFEOLLNVNVRANCNKII 358  
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Db 301 QDVSCFOHLVQANVRNKKVLKDAVNNTAKGITDYKKGFSAFEQLLNTNVSRANCNKII 360  
QY 359 MLFTDGGEEAQAIEFNKYNKDKKVRVFRFVSGOHNYERGPQIOMACENKGYIYEIPSIGA 418  
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Db 361 MLFTDGGEEAQAIEFNKYNKDKKVRVFRFVSGOHNYERGPQIOMACENKGYIYEIPSIGA 420  
QY 419 IRIQTQEYLDVLGRPMVLADKAKOVQWNTNVYLDALGLVITGTLPVNITGQFENKTN 478  
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Db 421 IRIQTQEYLDVLGRPMVLADKAKOVQWNTNVYLDALGLVITGTLPVNITGQFENKTN 480  
QY 479 LKNQLILGVMGVDVSLIEDIKRLTPRTILCPNGYYPADIPNGYVLLHPNLQPK----- 530  
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Db 481 LKNQLILGVMGVDVSLIEDIKRLTPRTILCPNGYYPADIPNGYVLLHPNLQPKIGVIGIPT 540  
QY 531 -----NPKSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTILVKSQDER 579  
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Db 541 INLRKRRPNVQNPQSQEPVTLDFLDAELENDIKVEIRNKMIDGESGEKTFRTILVKSQDER 600  
QY 580 YIDKGNRTYTPVNGTDY-SLALVLPYTFYIYAKLEETITQARKSKGKMKDSTLKP 638  
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Db 601 YIDKGNRTYTPVNGTDYSSIALVLPYTFYIYAKLEETITQARY-----SETLKP 653  
QY 639 DNFEESGYTFIAPRDYCNDLKISDNTTEFLNFEFIDRKTNNPNCNADLINRVLLDAG 698  
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Db 654 DNFEESGYTFIAPRDYCNDLKISDNTTEFLNFEFIDRKTNNPNCNADLINRVLLDAG 713  
QY 699 FTNELVQVNSKQKNIKGVKARFVVDGGITRVYKPEAGENQENPETEYEDSFYKRSLDN 758  
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Db 714 FTNELVQVNSKQKNIKGVKARFVVDGGITRVYKPEAGENQENPETEYEDSFYKRSLDN 773  
QY 759 DNYVFTAPYFNKSGGAYESGIMWKAIVEIYIOGKLLKPAVVGIKIDVNSWIENFTKTSI 818  
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Db 774 DNYVFTAPYFNKSGGAYESGIMWKAIVEIYIOGKLLKPAVVGIKIDVNSWIENFTKTSI 833  
QY 819 RDPGAGPYCDCKRNSDVMDCVILDDGGFLLMANHDDYTNOIGRFFGEIDPSLMRHLVNI 878  
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QY 879 VYAFNKSVDYQSVCEPGAAPKOGAGHRSAYVPSVADILQIGWATAAASWILQQFLLSLT 938  
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Db 894 VYAFNKSVDYQSVCEPGAAPKOGAGHRSAYVPSVADILQIGWATAAASWILQQFLLSLT 953  
QY 939 FPRLEAVEMEDDDFTASLSKOSCITEQTFYFDNDKSFSGVLDCGNCSTRIFHGEKLAN 998  
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Db 954 FPRLEAVEMEDDDFTASLSKOSCITEQTFYFDNDKSFSGVLDCGNCSTRIFHGEKLAN 1013  
QY 999 TNLIFIMVESKGTCTCDTRLIIQAQTSOGPNPCOMVK 1036  
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Db 1014 TNLIFIMVESKGTCTCDTRLIIQAQTSOGPNPCOMVK 1051

Search completed: June 8, 2001, 19:38:04  
Job time: 31330 sec



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Date: Jun 8, 2001 7:55 PM  
About: Results were produced by the GenCore software, version 4.5,  
Copyright (c) 1993-2000 CompuGen Ltd.

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-DB=Issued\_Patents\_NA -QPM=fastap -SUFFIX=rni -GAPOP=12.000  
-GAPEXT=4.000 -MINMATCH=0.100 -LOOPCL=0.000 -XGAPEXT=0.000  
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-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR SCORE=pct  
-THR MAX=100 -THR MIN=0 -ALIGN=15 -MODE=LOCAL -OUTFMT=pfs  
-NORM=ext -MINLEN=0 -MAXLEN=2000000000  
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-WAIT -THREADS=1

## Search information block:

Query: US-09-397-548-16  
Query length: 1036  
Database: Issued\_Patents\_NA:\*  
Database sequences: 302621  
Database length: 97501344  
Search time (sec): 184.840000

## score\_list:

Sequence	Strd Orig	ZScore	Escore	Len	Documentation
/cgn2_6/ptodata/2/ina/5A_COMB.seq:US-07-745-206A-24	+	5443.00	11005.97	0.0	3566
/cgn2_6/ptodata/2/ina/5B_COMB.seq:US-08-311-363-24	+	5443.00	11005.97	0.0	3566
/cgn2_6/ptodata/2/ina/5A_COMB.seq:US-08-435-543A-11	+	5443.00	11005.85	0.0	3600
/cgn2_6/ptodata/2/ina/5A_COMB.seq:US-08-455-543A-33	+	5443.00	11005.85	0.0	3600
/cgn2_6/ptodata/2/ina/5B_COMB.seq:US-08-193-078B-11	+	5443.00	11005.85	0.0	3600
/cgn2_6/ptodata/2/ina/5B_COMB.seq:US-08-223-305C-11	+	5443.00	11005.85	0.0	3600
/cgn2_6/ptodata/2/ina/5B_COMB.seq:US-08-223-305C-33	+	5443.00	11005.85	0.0	3600
/cgn2_6/ptodata/2/ina/5B_COMB.seq:US-08-149-097D-11	+	5443.00	11005.85	0.0	3600
/cgn2_6/ptodata/2/ina/6A_COMB.seq:US-08-949-386-11	+	5443.00	11005.85	0.0	3600
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; Patent No. 5429921  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: McCue, Ann  
; APPLICANT: Feldman, Daniel  
; TITLE OF INVENTION: Human Calcium Channel Compositions and  
; TITLE OF INVENTION: Methods  
; NUMBER OF SEQUENCES: 32  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Fitch, Even, Tabin & Flannery  
; STREET: 135 S. LaSalle  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: U.S.A.  
; ZIP: 60603  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/07745.206A  
; FILING DATE: 19910815  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Feder, Scott B  
; REFERENCE/DOCKET NUMBER: 51504  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312-372-7842  
; INFORMATION FOR SEQ ID NO: 24:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 3566 base pairs  
; TYPE: NUCLEIC ACID  
; STRANDEDNESS: unknown  
; TOPOLOGY: unknown  
; MOLECULE TYPE: DNA (genomic)  
; FEATURE:  
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; LOCATION: 1..3273  
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; Patent No. 5876958
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: Feldman, Daniel
; APPLICANT: McCue, Ann
; APPLICANT: Brenner, Robert
; TITLE OF INVENTION: Human Calcium Channel Compositions and
; TITLE OF INVENTION: Methods
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Brown, Martin, Haller & McClain
; STREET: 1660 Union Street
; CITY: San Diego
; STATE: California
; COUNTRY: USA
; ZIP: 92101-2926
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/311,363
; FILING DATE:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/745,206
; FILING DATE: 15-AUG-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Seidman, Stephanie L.
; REGISTRATION NUMBER: 33,779
; REFERENCE/DOCKET NUMBER: 6362-51506
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619)238-0999
; TELEFAX: (619)238-0062
; INFORMATION FOR SEQ ID NO: 24:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3566 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: unknown
; TOPOLOGY: unknown
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; Patent No. 5792846

; GENERAL INFORMATION:

; APPLICANT: Harpold, Michael

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; APPLICANT: Feldman, Daniel

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; APPLICANT: Brenner, Robert

; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND

; TITLE OF INVENTION: METHODS

; NUMBER OF SEQUENCES: 57

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; ZIP: 92101-2926

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Diskette

; COMPUTER: IBM Compatible

; OPERATING SYSTEM: DOS

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FILING DATE: May 31, 1995  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/223,305  
FILING DATE: April 4, 1994  
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APPLICATION NUMBER: 07/868,354  
FILING DATE: April 10, 1992  
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APPLICATION NUMBER: US 07/745,206  
FILING DATE: 15-AUG-1991  
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PRIOR APPLICATION DATA:  
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FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603,751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176,899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
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TELEPHONE: (619)238-0999  
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; APPLICATION NUMBER: WO PCT/US89/01408
; FILING DATE: 04-APR-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/176,899
; FILING DATE: 04-APR-1988
; ATTORNEY/AGENT INFORMATION:
; NAME: Seidman, Stephanie L.
; REGISTRATION NUMBER: 33,779
; REFERENCE/DOCKET NUMBER: 6362-52517
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619)238-0999
; TELEFAX: (619)238-0062
; INFORMATION FOR SEQ ID NO: 33:
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: Sequence 11, Application US/08193078B  
: Patent No. 5846757  
: GENERAL INFORMATION:  
: APPLICANT: Harpold, Michael  
: APPLICANT: Ellis, Steven  
: APPLICANT: Williams, Mark  
: APPLICANT: Feldman, Daniel  
: APPLICANT: McCue, Ann  
: APPLICANT: Brenner, Robert  
: TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
: NUMBER OF SEQUENCES: 29  
: CORRESPONDENCE ADDRESS:  
: ADDRESSEE: BROWN, MARTIN, HALLER & MCCLAIN  
: STREET: 1660 UNION STREET  
: CITY: SAN DIEGO  
: STATE: CA  
: COUNTRY: USA  
: ZIP: 92101  
: COMPUTER READABLE FORM:  
: MEDIUM TYPE: Floppy disk  
: COMPUTER: IBM PC compatible  
: OPERATING SYSTEM: PC-DOS/MS-DOS  
: SOFTWARE: PatentIn Release #1.0, Version #1.25  
: CURRENT APPLICATION DATA: US/08193,078B  
: APPLICATION NUMBER: US/08193,078B  
: FILING DATE: 07-FEB-1994  
: CLASSIFICATION: 435  
: PRIOR APPLICATION DATA:  
: APPLICATION NUMBER: US 07/868,354  
: FILING DATE: 10-APR-1992  
: PRIOR APPLICATION DATA:  
: APPLICATION NUMBER: US 07/745,206  
: FILING DATE: 15-AUG-1991  
: ATTORNEY/AGENT INFORMATION:  
: NAME: Seigman, Stephanie L.  
: REGISTRATION NUMBER: 33,779  
: REFERENCE/DOCKET NUMBER: 6362-53607  
: TELECOMMUNICATION INFORMATION:  
: TELEPHONE: 619-238-0999  
: TELEFAX: 619-238-0062  
: INFORMATION FOR SEQ ID NO: 11:  
: SEQUENCE CHARACTERISTICS:  
: LENGTH: 3600 base pairs  
: TYPE: nucleic acid  
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: GENERAL INFORMATION:  
: APPLICANT: Harpold, Michael  
: APPLICANT: Ellis, Steven  
: APPLICANT: Williams, Mark  
: APPLICANT: Feldman, Daniel  
: APPLICANT: McCue, Ann  
: APPLICANT: Brenner, Robert  
: TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
: NUMBER OF SEQUENCES: 57  
: CORRESPONDENCE ADDRESS:  
: ADDRESSEE: Brown, Martin, Haller & McClain  
: STREET: 1660 Union Street  
: CITY: San Diego  
: STATE: California  
: COUNTRY: USA  
: ZIP: 92101-2926  
: COMPUTER READABLE FORM:  
: MEDIUM TYPE: Diskette  
: COMPUTER: IBM Compatible  
: OPERATING SYSTEM: DOS  
: SOFTWARE: FastSeq Version 1.5  
: CURRENT APPLICATION DATA:  
: APPLICATION NUMBER: US/08/223,305C  
: FILING DATE: April 4, 1994  
: PRIOR APPLICATION DATA:  
: APPLICATION NUMBER: 07/868,354  
: FILING DATE: April 10, 1992  
: PRIOR APPLICATION DATA:  
: APPLICATION NUMBER: US 07/745,206  
: FILING DATE: 15-AUG-1991



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PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 07/620,250
FILING DATE: 30-NOV-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/482,384
FILING DATE: 20-FEB-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/603,751
FILING DATE: 04-APR-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/US89/01408
FILING DATE: 04-APR-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/176,899
FILING DATE: 04-APR-1988
ATTORNEY/AGENT INFORMATION:
NAME: Seidman, Stephanie L.
REGISTRATION NUMBER: 33,779
REFERENCE/DOCKET NUMBER: 52516 (P519739)
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619)238-0999
TELEFAX: (619)238-0062
INFORMATION FOR SEQ ID NO: 11:
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; Patent No. 5851824  
; GENERAL INFORMATION:  
; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: Feldman, Daniel  
; APPLICANT: McCue, Ann  
; APPLICANT: Brenner, Robert  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; TITLE OF INVENTION: METHODS  
; NUMBER OF SEQUENCES: 57  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Hallier & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: USA  
; ZIP: 92101-2926  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FastSeq Version 1.5  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/223,305C  
; FILING DATE: April 4, 1994  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/868,354  
; FILING DATE: April 10, 1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/745,206  
; FILING DATE: 15-AUG-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/620,250  
; FILING DATE: 30-NOV-1990  
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; APPLICATION NUMBER: US 07/482,384  
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; APPLICATION NUMBER: US 07/603,751  
; FILING DATE: 04-APR-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/US89/01408  
; FILING DATE: 04-APR-1989  
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; APPLICATION NUMBER: US 07/176,899  
; FILING DATE: 04-APR-1988  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Seidman, Stephanie L.  
; REGISTRATION NUMBER: 33,779  
; REFERENCE/DOCKET NUMBER: 52516 (P519739)  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619)238-0999  
; TELEFAX: (619)238-0062  
; INFORMATION FOR SEQ ID NO: 33:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 3600 base pairs

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; GENERAL INFORMATION:

; APPLICANT: Harpold, Michael

; APPLICANT: Ellis, Steven

; APPLICANT: Williams, Mark

; APPLICANT: Feldman, Daniel

; APPLICANT: McCue, Ann

; APPLICANT: Brenner, Robert

; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND

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; TITLE OF INVENTION: METHODS
; NUMBER OF SEQUENCES: 40
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Brown, Martin, Haller & McClain
; STREET: 1660 Union Street
; CITY: San Diego
; STATE: California
; COUNTRY: USA
; ZIP: 92101-2926
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
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; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/149,097D
; FILING DATE: 05-NOV-1993
; CLASSIFICATION: 435
; PRIOR APPLICATION NUMBER: 08/105,536
; FILING DATE: 11-AUG-1993
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; APPLICATION NUMBER: WO PCT/US92/06903
; FILING DATE: 14-AUG-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/914,231
; FILING DATE: 13-JUL-1992
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; FILING DATE: 10-APR-1992
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; PRIOR APPLICATION DATA:
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; APPLICATION NUMBER: US 07/176,899
; FILING DATE: 04-APR-1988
; ATTORNEY/AGENT INFORMATION:
; NAME: Seidman, Stephanie L.
; REGISTRATION NUMBER: 33,779
; REFERENCE/DOCKET NUMBER: 6362-55038
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619) 238-0999
; TELEFAX: (619) 238-0062
; INFORMATION FOR SEQ ID NO: 11:
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; APPLICANT: Harpold, Michael  
; APPLICANT: Ellis, Steven  
; APPLICANT: Williams, Mark  
; APPLICANT: McCue, Ann  
; APPLICANT: Gillespie, Alison  
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND  
; NUMBER OF SEQUENCES: 38  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Brown, Martin, Haller & McClain  
; STREET: 1660 Union Street  
; CITY: San Diego  
; STATE: California  
; COUNTRY: US  
; ZIP: 92101  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/949,386

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; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/290,012
; FILING DATE: 11-AUG-1994
; APPLICATION NUMBER: 08/149,097
; FILING DATE: 5-NOV-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/105,536
; FILING DATE: 11-AUG-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Seidman, Stephanie L.
; REGISTRATION NUMBER: 33,779
; REFERENCE/DOCKET NUMBER: 519808
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619) 238-0999
; TELEFAX: (619) 238-0062
; INFORMATION FOR SEQ ID NO: 11:
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; Patent No. 6040436  
; GENERAL INFORMATION:  
; APPLICANT: Franco, Rodrigo  
; APPLICANT: Sun Chen, Ai Ru  
; APPLICANT: Suey, David J.  
; TITLE OF INVENTION: NUCLEIC ACID ENCODING HUMAN NEURONAL  
; TITLE OF INVENTION: CALCIUM CHANNEL SUBUNITS  
; NUMBER OF SEQUENCES: 6  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.  
; STREET: Two Militia Drive  
; CITY: Lexington  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 02173-4799  
; COMPUTER READABLE FORM:  
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; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/713,118  
; FILING DATE: 16-SEP-1996  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Mata, Elizabeth W.  
; REGISTRATION NUMBER: 38,236  
; REFERENCE/DOCKET NUMBER: ACC96-01  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 617-861-6240  
; TELEFAX: 617-861-9540  
; INFORMATION FOR SEQ ID NO: 3:  
; SEQUENCE CHARACTERISTICS:  
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; TYPE: nucleic acid  
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; GENERAL INFORMATION:  
; APPLICANT: Franco, Rodrigo  
; APPLICANT: Sun Chen, Ai Ru  
; APPLICANT: Suey, David J.  
; TITLE OF INVENTION: NUCLEIC ACID ENCODING HUMAN NEURONAL  
; TITLE OF INVENTION: CALCIUM CHANNEL SUBUNITS  
; NUMBER OF SEQUENCES: 6  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.  
; STREET: Two Militia Drive  
; CITY: Lexington  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 02173-4799  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patentin Release #1.0, Version #1.30  
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; APPLICATION NUMBER: US/09/452,007  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/08/713,118  
; FILING DATE: 16-SEP-1996  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Mata, Elizabeth W.  
; REGISTRATION NUMBER: 38,236  
; REFERENCE/DOCKET NUMBER: ACC96-01  
; TELECOMMUNICATION INFORMATION:  
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; Patent No. 5792846

; GENERAL INFORMATION:

; APPLICANT: Harpold, Michael

; APPLICANT: Ellis, Steven

; APPLICANT: Williams, Mark

; APPLICANT: Feldman, Daniel

; APPLICANT: McCue, Ann

; APPLICANT: Brenner, Robert

; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND

; TITLE OF INVENTION: METHODS

; NUMBER OF SEQUENCES: 57

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Brown, Martin, Haller & McClain

; STREET: 1660 Union Street



CITY: San Diego  
STATE: California  
COUNTRY: USA  
ZIP: 92101-2926  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/455.543A  
FILING DATE: May 31, 1995  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/223.305  
FILING DATE: April 4, 1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/868.354  
FILING DATE: April 10, 1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/745.206  
FILING DATE: 15-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/620.250  
FILING DATE: 30-NOV-1990  
PRIOR APPLICATION DATA:  
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FILING DATE: 20-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/603.751  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: WO PCT/US89/01408  
FILING DATE: 04-APR-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/176.899  
FILING DATE: 04-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Seidman, Stephanie L.  
REGISTRATION NUMBER: 33,779  
REFERENCE/DOCKET NUMBER: 6362-52517  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)238-0999  
TELEFAX: (619)238-0062  
INFORMATION FOR SEQ ID NO: 20:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 3657 base pairs  
TYPE: nucleic acid  
STRANDEDNESS: double  
TOPOLOGY: linear  
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; Patent No. 5851824
; GENERAL INFORMATION:
; APPLICANT: Harpold, Michael
; APPLICANT: Ellis, Steven
; APPLICANT: Williams, Mark
; APPLICANT: Feldman, Daniel
; APPLICANT: McCue, Ann
; APPLICANT: Brenner, Robert
; TITLE OF INVENTION: HUMAN CALCIUM CHANNEL COMPOSITIONS AND
; TITLE OF INVENTION: METHODS
; NUMBER OF SEQUENCES: 57
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Brown, Martin, Haller & McClain
; STREET: 1660 Union Street
; CITY: San Diego
; STATE: California
; COUNTRY: USA
; ZIP: 92101-2926
; COMPUTER READABLE FORM:
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq Version 1.5
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/223,305C
; FILING DATE: April 4, 1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/868,354
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; FILING DATE: April 10, 1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/745,206
; FILING DATE: 15-AUG-1991
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; APPLICATION NUMBER: US 07/603,751
; FILING DATE: 04-APR-1989
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; APPLICATION NUMBER: WO PCT/US89/01408
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; APPLICATION NUMBER: US 07/176,899
; FILING DATE: 04-APR-1988
; ATTORNEY/AGENT INFORMATION:
; NAME: Seidman, Stephanie L.
; REGISTRATION NUMBER: 33,779
; REFERENCE/DOCKET NUMBER: 52516 (P519739)
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619)238-0999
; TELEFAX: (619)238-0062
; INFORMATION FOR SEQ ID NO: 20:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3657 base pairs
; TYPE: nucleic acid
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; MOLECULE TYPE: Genomic DNA
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Quality: 5423.50 Length: 1055
Ratio: 5.235 Gaps: 1
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INFORMATION FOR SEQ ID NO: 34:

SEQUENCE CHARACTERISTICS:

LENGTH: 3585 base pairs

TYPE: nucleic acid

STRANDEDNESS: double

TOPOLOGY: linear

MOLECULE TYPE: DNA (genomic)

FEATURE:

NAME/KEY: CDS

LOCATION: 35..3295

OTHER INFORMATION: /standard\_name="Alpha-2c"

FEATURE:

NAME/KEY: 5'UTR

LOCATION: 1..34

FEATURE:

NAME/KEY: 3'UTR

LOCATION: 3296..3585

US-08-455-543A-34

alignment\_scores:

Quality: 5403.50 Length: 1036

Ratio: 5.241 Gaps: 1

Percent Similarity: 99.517 Percent Identity: 99.517

alignment\_block:

US-09-397-548-16 x US-08-455-543A-34

Align seg 1/1 to: US-08-455-543A-34 from: 1 to: 3585

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35 ATGGCTGCTGGCTGCTGGCTGGCTGGCTGGCTGGCTGGCTGGCTGGCT 84  
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